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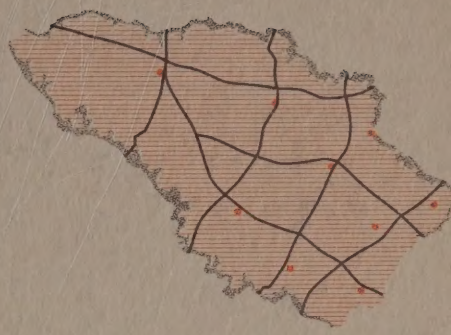
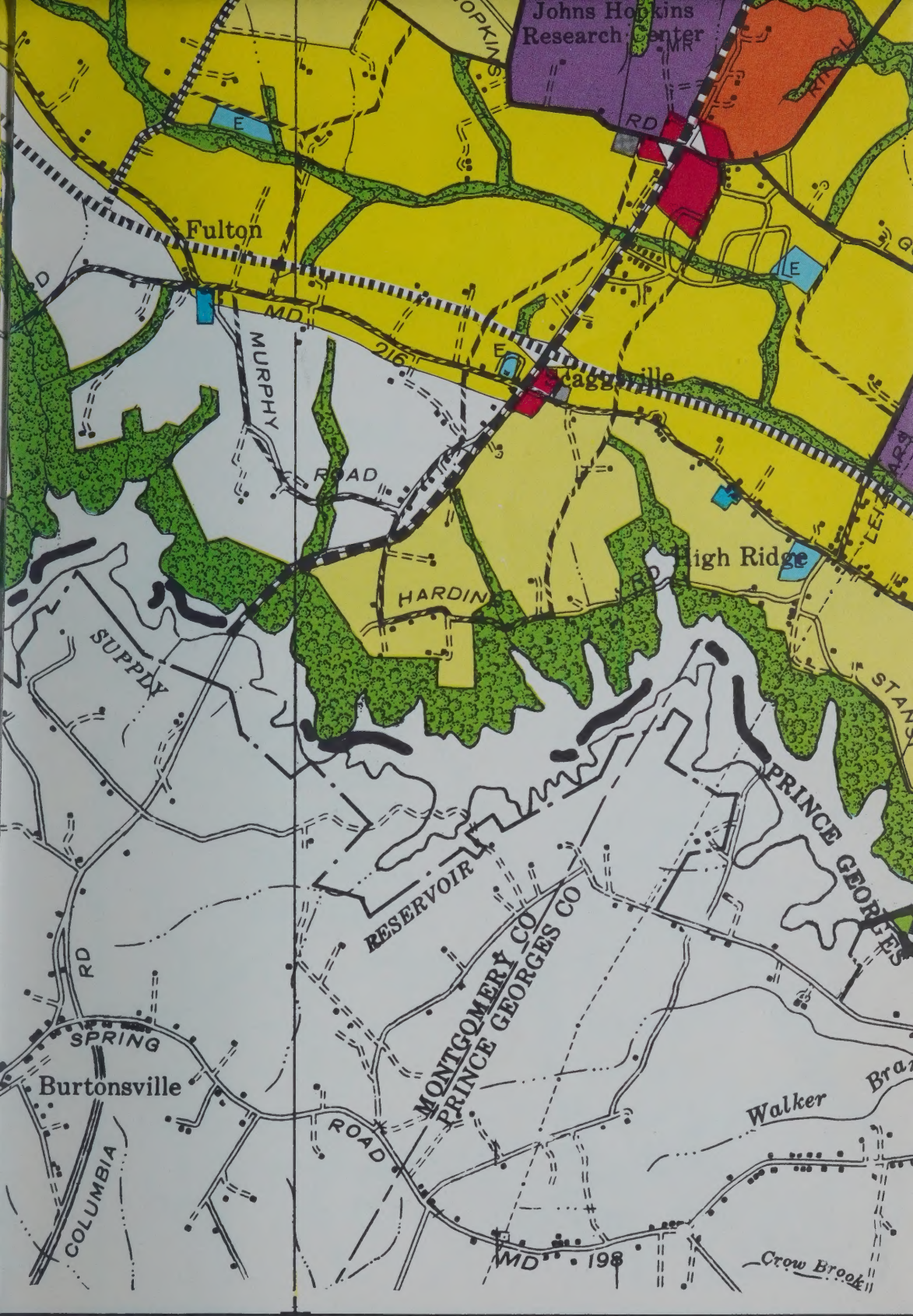


HOWARD COUNTY

GENERAL PLAN

HOWARD COUNTY
PLANNING
COMMISSION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Howard County

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HOWARD COUNTY
GENERAL PLAN

Introduction

Pursuant to the provisions of Chapter 184 of the Acts of the Maryland General Assembly of 1953, the Planning Commission prepared a Master or General Plan of Howard County, held numerous public hearings and adopted the Plan on July 20, 1960. Over two years were spent in the preparation of the Plan.

The General Plan was developed with assistance from many persons and organizations. The Planning Commission would like to thank all who have helped and especially the following: C. William Brooks, William Martien, Dr. Dorothy A. Muncy, Oscar Sutermeister, Alan M. Voorhees, Board of Education, Metropolitan Commission, Volunteer Fire Service, Police Department, Health Department, Road Department, Improvement Associations, Citizens Planning Association, Service Clubs, Howard County Home Builders Association, Church Groups, Baltimore Gas and Electric Company, Baltimore and Ohio Railroad Company, Maryland State Roads Commission, Baltimore Regional Planning Council, Maryland State Planning Commission and Maryland-National Capital Park and Planning Commission. The Planning Commission would also like to thank the County Commissioners, Charles M. Scott, President, Norman E. Moxley and Arthur K. Pickett, for their aid and cooperation in developing the General Plan and the planning program for Howard County.

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The Planning Process

COUNTY PLANNING

"Planning is the art and science of preparing and administering within the framework of local government a long-range comprehensive general plan for the physical development of a county."

GOAL OF COUNTY PLANNING

The goal of planning is to further the welfare of the people in the county by creating a more efficient and attractive community environment.

NEED FOR PLANNING

Planning is needed to *prevent* or solve problems created by:

Expanding population and by increased demands for public services and facilities such as water, sewerage and storm drainage.

Increased school enrollment with the need for additional schools and teachers.

Greater use of the automobile which has created a tremendous demand for more and better highways.

Population growth which has created a need for more and better housing and a program for removing deteriorated houses and buildings.

Changing economic base with resulting pressure from institutions and firms to locate in counties.

Changing agricultural pattern with resulting decrease in agricultural employment.

RESULTS OF LITTLE OR NO PLANNING

Without planning, Howard County could easily deteriorate as sections of many unfortunate counties have, resulting in:

Slum areas caused primarily by overcrowding of land by buildings and by buildings being overcrowded by people.

Mixing of residential, commercial and industrial land uses, with a resulting decrease of property values and efficiency.

Major streets running through once quiet residential areas, creating dangerous streets and a poor living environment.

Inadequate and overcrowded schools, parks and other public facilities.

A decreasing tax structure with increased demand for services.

BENEFITS OF GOOD PLANNING

By having a general plan:

It is possible for the various county departments and boards to coordinate their activities and to work toward the achievement of a common goal. The plan can prevent much duplication of efforts and bring about greater efficiency within the County Government.

More efficient budget and capital improvement programming can be accomplished. Officials know in advance what must be purchased and can plan to provide the necessary funds.

The need, location and priority for expansion of public utilities, water and sewers can be established.

School sites can be predetermined and purchased in advance of need with resulting large savings of public money.

The homeowner, merchant, developer and industrialist can invest with more assurance that their investment will be sound and not endangered.

THE GENERAL PLAN

The General Plan is a long-range comprehensive general guide to the growth of the County, that is understandable, available and amendable.

Long-Range—The proposals within the plan should be based on a thirty-to-forty year period of time in order to make provision for all foreseeable basic needs and to achieve the most economical development pattern.

Comprehensive—The plan should be concerned with all the needs of the citizens of the County in which the use of land is involved. All public and private land is included in the plan.

General—The proposals in the plan should be definite but general in nature.

Understandable and Available—The citizens and officials should be able to easily understand and interpret the plan.

Amendable—The general plan should be flexible in order to be changed in the light of new conditions and new developments. A complete review should be made of the general plan once every five or six years.

FUNCTIONS OF PLANNING COMMISSION

The Planning Commission advises the County Commissioners and makes recommendations to them on planning and zoning matters. Its recommendations may be accepted or rejected. The Commission is responsible for preparing, adopting and administering a general plan for the physical development of the County. Full time planners trained in physical planning, research and the skills necessary to develop general and detailed plans are on the staff. The staff works closely with county and state departments and citizens in preparing plans. The Commission is responsible for doing research on planning, preparing subdivision and zoning regulations, administering subdivision regulations, and preparing a Capital Improvement Program. They also cooperate with nearby counties, cities, state and federal agencies in developing a plan for the County that fits in with the regional plan for the Baltimore and Washington area.

THE PLANNING PROCESS

The Planning Process is the course of action that is directed toward preparing and administering the general plan. The Planning Process is in four major parts:

Preparation for Planning
Preparation of the General Plan
Implementation of the General Plan
General Plan Revision

Preparation For Planning—Enabling Legislation is passed establishing the Planning Commission and rules and regulations under which it may operate. Funds are appropriated to provide the staff to do the planning.

Preparation of the General Plan—The planning staff followed the basic steps outlined below in preparing the General Plan:

Assumptions—The Planning Commission, through its studies, makes basic assumptions, for example, the county will continue to grow in population and economic activity.

Objectives—Planning objectives for the county are developed with the view that the best possible social, economic and physical environment should be provided for the people of the county.

Standards—Planning Standards are established. Subdivision regulations are an example.

Research—Research is an important part of the planning program. Information on current conditions are collected and facts about the county compiled, for example: number of people, the physical conditions and resources of the county, the existing land use pattern, the economy and employment pattern, existing and proposed highways, and community facilities and services such as schools and recreation.

Public Participation—Throughout the Planning Process the people in the county are given numerous opportunities to express their ideas to the planners as to the type of county they want.

Policy and Design Concept—After sufficient research has been made, the information is analyzed and a policy and design concept established. The planning policy and design concept should be a statement of what kind of county is desired.

General Plan Prepared and Revised With The Public—The general plan is prepared and discussed with officials and citizens of the county at official public hearings. At that time the citizens of the county express their views and ideas on the proposed general plan.

Adoption of General Plan by Planning Commission—After adoption by the Planning Commission, the general plan, maps and report describing it, are published and made available.

CONTENTS OF GENERAL PLAN

The contents of the general plan include the following elements:

Population—Forecasts

Land Use—The location and relationship of major land uses.

- Residential
- Commercial
- Industrial
- Public and semi-public

Community Facilities—The proposed location, character and extent of community facilities. For example:

- Schools
- Parks and Open Space
- Recreation
- Public Utilities
- Institutions
- Fire and Police Stations

Circulation System—The facilities needed to move people and goods within the county.

- Freeways, primary, secondary and collector highways
- Public transportation system

IMPLEMENTING THE PLAN

The General Plan is brought into reality or implemented by the following planning tools:

Zoning Map and Zoning Regulations—The zoning map and zoning regulations are the legislative instruments for controlling land with respect to its use, population density, lot size, the intensity and placement of buildings, and the height of structures.

Subdivision Regulations—The subdivision regulations control how land is to be subdivided for various uses.

Capital Improvement Program—Capital Improvement Programming is one of the direct ways of implementing the general plan. It outlines in a five to six year program the amount of funds needed to attain part of the community facilities outlined in the general plan.

Community Renewal—Specific projects for improving and renewing deteriorating and sub-standard areas and preventing the development of new slums.

PLAN REVIEW

At least every five years the General Plan should be reviewed and revised in view of new developments and needs of the County.

Planning Objectives

The objective of planning is to further the welfare of the people in the County, by helping to create a more efficient and attractive community environment. The Planning Commission feels that the best method by which the County can achieve these objectives is through the preparation and implementation of a general plan. The general plan, of course, should be realistic and achievable, in that the County has or will have the financial means and necessary tools to execute the plan.

The Planning Commission feels that the following planning objectives or goals are desirable for guiding the future growth of the County:

ECONOMICAL PATTERN OF DEVELOPMENT

Provision should be made for private economic activity which will provide a variety of employment opportunities and a high level of family income.

Provision should be made for enhancing and stabilizing the general property values to produce sufficient tax income to pay for public services.

An efficient system should be established for transporting people and goods within the County and the Baltimore-Washington Metropolitan Area. This system should include mass-transit facilities between the areas of urban concentration.

The establishment of efficient systems of community facilities (water, sewers and storm drainage) should be developed in a manner that minimizes the capital expenditures and operating costs but provides a high quality of facilities and services.

Agricultural land and related activities should be preserved, where possible, as a continuing value to the County.

Land should be reserved for use for industrial purposes that will be free from intermixing by incompatible or conflicting uses. Industries should be selected which will be compatible with both human and property values.

Utilities and community services should be extended at the proper time and in relation to the intensity of residential, commercial and industrial development plans.

Adequate commercial facilities should be provided that are well located and designed for maximum convenience and function in relation to the future population and purchasing power of the area to be served.

COMMUNITIES

Communities should:

Offer varied opportunities for contact and experience in living, working, recreation and shopping activities.

Have a distinct identity from other communities or groups of neighborhoods and be adequately served with com-

munity facilities, schools, cultural and recreational opportunities.

Provide employment opportunities reasonably close to residential areas, making a short journey to work possible and reducing the demands on the major circulation system.

Provide a broad tax base to pay for the necessary community services.

Provide shopping facilities and professional services nearby which are properly located for convenient and safe use.

Be renewed when deteriorated to have pleasant living conditions and adequate facilities and to insure continuing investment by the residents and County government.

PRESERVATION OF OPEN SPACE AND SCENIC BEAUTY

Open space (farm land, forests, rivers and streams) should be reserved as a relief from future concentrated residential, commercial and industrial development.

Open areas of natural recreational potential should be reserved and acquired. They should be properly located to handle the anticipated demands and needs of the future population.

Roads through scenic areas should be protected from commercial signs and unsightly development and landscaped and planted for visual enjoyment.

CONSERVATION AND UTILIZATION OF NATURAL RESOURCES

The life, health and safety of citizens should be protected and the cultural achievements of the County preserved.

Continued efforts should be made to improve and enrich the educational and cultural activities.

The best soils should be protected from erosion and from premature urban development.

Reservoirs and watershed areas should be protected.

COORDINATION OF COUNTY PLANS

The plans of the County should take into consideration all private and public agency plans which have programs concerned with land use, highways, community facilities, water development, conservation, public transportation, and community renewal.

Statistical data of the County should be collected in one central organization for maximum use by interested jurisdictions.

A County Capital Improvement Program should be developed based on integrated plans for public works and community facilities.

Continued efforts should be made to encourage greater citizen participation in the planning process.

Existing Land Use Pattern

There are 160,640 acres in Howard County of which 18,267 acres are "developed" and 142,373 acres, undeveloped. The term "developed" refers to land that is under intense use for residential, commercial and industrial activities. Agricultural, wooded or vacant land is considered open or undeveloped land. The percentage of "developed" land to the total area of the County is 11%. Of the 18,267 acres of developed land, 4,264 acres are utilized for residential purposes, 522 acres for commercial, 1,214 acres for industrial, 1,483 acres for county, state and federal government, 478 acres for schools and churches, 6,272 acres for open recreation, seventy-seven acres for institutional (developed), 236 acres for cemeteries, and 3,721 acres for highways and utilities rights-of-way. The "developed" land area indicated above serves a population of 36,000 people. Table I, "Developed and Undeveloped Land in Howard County," lists the acreages and percentages of the various types of land use in relation to the total developed land in the County.

TABLE I

DEVELOPED AND UNDEVELOPED LAND
IN HOWARD COUNTY
(MARCH, 1960)

	Acres	Percentage of Total Developed Land
Developed Land:		
Residential	4,264	23.3
Commercial	522	2.9
Industrial	1,214	6.6
Government	1,483	8.1
Churches and Schools	478	2.6
Open Recreational	6,272	34.4
Institutional (Developed only)	77	0.4
Cemeteries	236	1.3
Rights-of-Way	3,721	20.4
Total Developed Land	18,267	100.0
Undeveloped Land:		
Institutional (Woodland, Vacant or Agricultural)	1,404	
Open Areas (Woodland, Vacant or Agricultural)	139,852	
Water	1,117	
Total Undeveloped Land	142,373	
Land Area of Howard County	160,640	

Of the total of 142,373 acres "undeveloped," 38,539 acres are wooded and 103,834 acres are utilized by agriculture, undeveloped institutional land and major water bodies. Preliminary subdivision plans had been approved but not developed as of February 1960, for 5,169 acres of the above undeveloped land.

Summary of General Plan

In the General Plan, which is essentially a thirty to forty year plan, more land is proposed for land uses, such as residential, than will actually be developed within forty years. Table II, "Howard County General Plan Land Use," lists proposed acreages. For example, 115,208 acres of land are proposed for residential use. It is anticipated that approximately 20,000 to 22,000 acres will actually be developed by the year 2000, although more will be under development. On the other hand, if the population expands as anticipated, most of the land proposed for commerce, industry, schools and other community facilities will be under development by the year 2000. Within forty years, it is felt that a total of 50,000 to 56,000 acres of land will be developed or under active development in Howard County. See Map, "General Plan for Howard County" (located in map pocket).

HOWARD COUNTY GENERAL PLAN LAND USE **TABLE II**

Proposed Land Use—Area in Acres

RESIDENTIAL		
R-12	5,333	
R-16	6,187	
R-20	49,218	
R-40	22,152	
R-90	31,317	
Apartments	808	
T-2	193	
Total		115,208
COMMERCIAL		
SC	180	
B-1	59	
B-2	392	
CO	32	
T-1	209	
Total		872
INDUSTRIAL		
SP	422	
MR	2,786	
M-1	247	
M-2	2,968	
Utilities	18	
Utilities—overhead utility right-of-way	571	
Total		7,012
PARKS, OPEN SPACE AND RECREATION		
Parks and wildlife reserves	24,130	
Cemeteries	236	
Clubs, Camps and Community Centers	820	
Nurseries	379	
Total		25,565

FEDERAL AND STATE INSTITUTIONS AND RESERVATIONS		
Total		1,906
COUNTY GOVERNMENT		
County Courthouse, Office Buildings, etc.	38	
Fire and Police Stations	16	
Library	1	
Post Office	-	
Total		55
INSTITUTIONS, CHURCHES AND PRIVATE SCHOOLS		
Total		884
PUBLIC SCHOOLS		
Elementary	817	
Junior High	416	
Junior-Senior High	20	
Senior High	191	
Junior College	48	
Total		1,492
HIGHWAYS		
Freeway	2,506	
Primary	1,744	
Secondary	1,296	
Collector	1,391	
Interchanges	736	
Total		7,646
TOTAL		160,640

RESIDENTIAL

There is a total of 115,208 acres proposed for residential use in the General Plan. Of this, 5,333 acres are proposed for R-12 (12,000 sq. ft. lot size), 6,187 acres for R-16 (16,000 sq. ft.), 49,218 acres for R-20 (20,000 sq. ft.), 22,152 acres for R-40 (40,000 sq. ft.), 31,317 acres for R-90 (90,000 sq. ft), 808 acres for apartments (R-A-1 and R-A-2) and 193 acres for trailer parks (T-2).

COMMERCIAL

A total of 1,123 acres is proposed for commercial land uses for the next thirty to forty years. Of this total, 872 acres are proposed to be located in commercial zones. The remaining 251 acres are existing commercial uses in zones other than commercial. The 872 acres proposed are in five zones: S-C (Shopping Center) 180 acres; B-1 (Local Center) fifty-nine acres; B-2 (General Commercial) 392 acres; C-O (Commercial Office) thirty-two acres; and T-1 (Commercial Service—Motel) 209 acres.

INDUSTRIAL

There are 6,423 acres proposed for industrial use in the General Plan. The land for industry is divided into several zones or categories. Special Permits (S-P) account for 422 acres. W. R. Grace and the Johns Hopkins Laboratory are the two main uses in the Special Permit category. There are

2,786 acres in the plan for M-R (Manufacturing Restricted), 247 acres for M-1 (Light Industrial) and 2,968 acres for M-2 (Heavy Manufacturing).

UTILITIES

Utility sites and utility rights-of-way occupy 589 acres.

PARKS AND OPEN SPACE

A total of 25,565 acres has been allocated in the plan for parks, open space and recreational activities. Of this total, 24,130 acres have been proposed for parks and wildlife reserves. It is estimated that approximately 19,000 acres of the land proposed for parks will be needed within the next forty years. About 5,000 acres are in an area in which it is not anticipated much growth will occur. Of the remaining 1,435 acres, cemeteries occupy 236 acres, clubs, camps and community centers, 820 acres, and nurseries, 379 acres.

FEDERAL, STATE AND COUNTY GOVERNMENT

Federal and State institutions and reserves have a total of 1,906 acres. A total of fifty-five acres is proposed for county government buildings, Court House, office buildings, fire and police stations, although there probably will be a need for additional land.

INSTITUTIONS, CHURCHES AND SCHOOLS

Institutions, churches and private schools occupy a total of 884 acres in the Plan. This total could increase as no attempt has been made to plan for new churches or private schools. A total of 1,492 acres are proposed for public schools and recreation centers. This includes 817 acres for elementary schools, 416 acres for junior high schools, twenty acres for a junior-senior high school, 191 acres for senior high schools and forty-eight acres for a junior college.

To serve the anticipated population of Howard County, and the traffic passing through Howard County, a total of 7,646 acres are allocated for highways. Of this total 2,506 acres are proposed for freeways, 1,744 acres for primary, 1,296 acres for secondary, and 1,391 acres for collector highways. Ramps and interchanges for the above highways will require approximately 736 acres. Residential roads are not included in this category.

Population Trends and Forecasts

In preparing a comprehensive general plan for the County, it is an essential part of the planning process to make an estimate of the population anticipated in the next thirty to forty years. Not much work can be done in land use planning until population estimates can be determined. Population forecasts are also necessary to estimate the need for community facilities and utilities (schools, recreation, sewer, water, gas, churches, roads, etc.). Population forecasts are essential in estimating where new population growth will locate in the County.

It is anticipated Howard County will greatly increase in population. The population forecast estimates the rate of increase and the range of population by certain years. As time passes, revised population estimates will be made as new information becomes available.

BALTIMORE-WASHINGTON AREA

Howard County lies between two of the fastest growing metropolitan areas, Baltimore and Washington (in population increase), in the United States. See *Population Report,* Howard County Planning Commission, April 29, 1959. According to the U.S. Bureau of Census, the Washington Standard Metropolitan area consists of Montgomery and Prince Georges Counties, Maryland, Arlington and Fairfax Counties, Virginia, and the cities of Washington, D.C., Falls Church and Alexandria. The Baltimore Metropolitan Area consists of Baltimore City, and Anne Arundel, Baltimore, Carroll, Harford and Howard Counties.

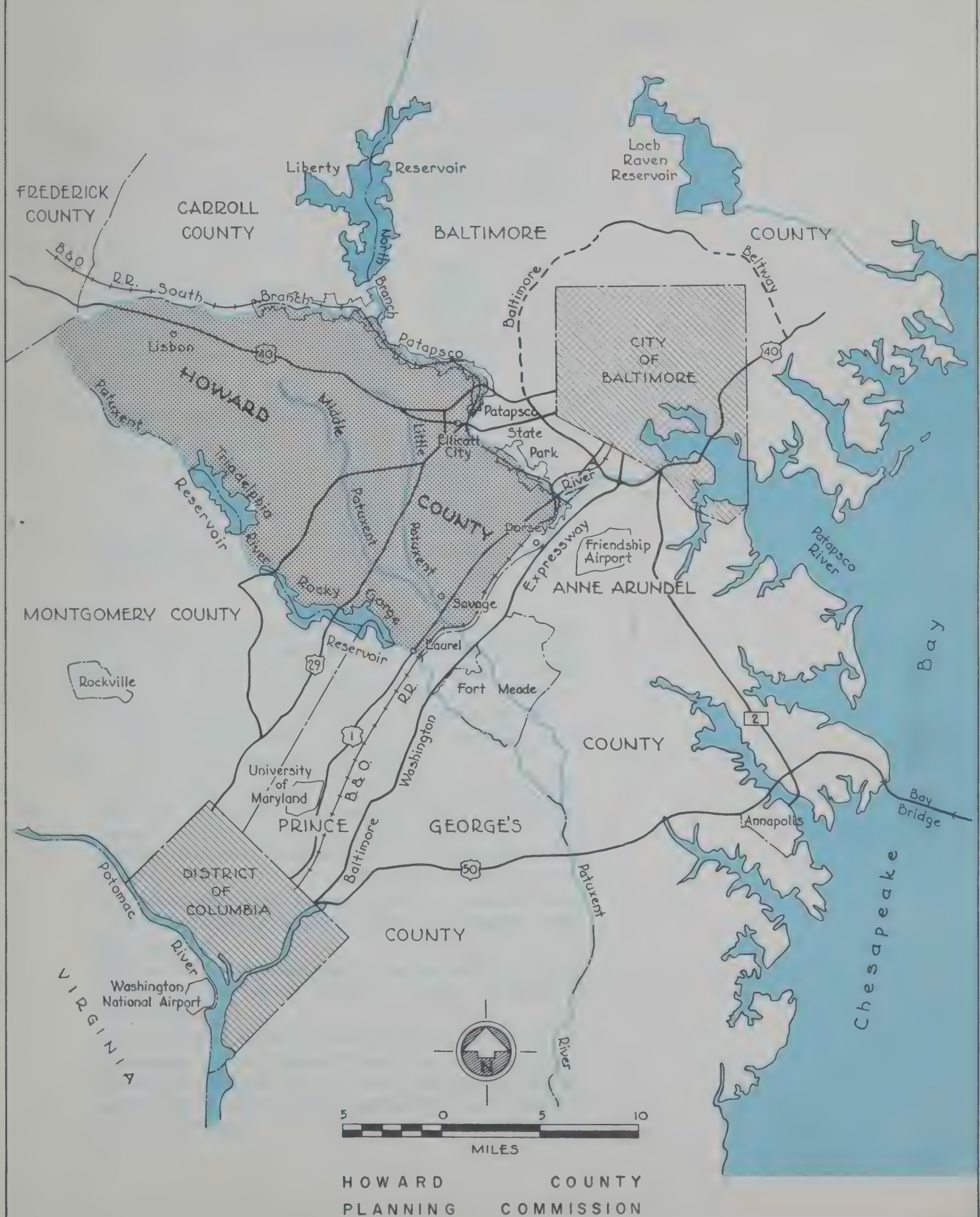
The rate of population growth is such that by the year 1980, the Baltimore and Washington Metropolitan Areas will probably merge as one large urbanized area. The two metropolitan areas had a combined population of 2,921,270 in 1950, and 3,770,271 in 1960 (preliminary Bureau of Census report). This is an increase of 29% over the ten year period.

The reason for the rapid growth in the two metropolitan areas in the last ten years has been attributed mainly to the movement of people into this area to work in the growing industrial and distribution activities in the Baltimore area and in the Federal installations in and around the District of Columbia. Most of the 849,001 population increase between 1950 and 1960 took place in the counties of the two metropolitan areas which are some of the fastest growing in the country, as shown in Table III, on page 17.

HOWARD COUNTY POPULATION

As Howard County is between two rapidly growing Metropolitan areas, it can naturally expect to receive a large population growth in the future. The population of Howard County from 1851 to 1880 increased at a very moderate rate of approximately one percent per year. There followed a period of some fifty years of almost stable population. From 1930 to 1940 the population increased 6.2%, 16,169 to 17,175. In the ten year period, 1940 to 1950, the population started increas-

HOWARD COUNTY AND ENVIRONS



ing at a very high rate, 34.6%. The recent U.S. Census Bureau figure for 1960, estimates the population for Howard County

TABLE III

POPULATION PATTERN, 1950-1960,
BALTIMORE-WASHINGTON AREAS
(1960 Preliminary Bureau of Census figures)

	1950	1960	Percent Increase
Baltimore-Washington Metro. Areas	2,921,270	3,770,482	29.1
Baltimore Metro. Area	1,457,181	1,784,447	22.4
Washington Metro. Area	1,464,089	1,986,035	35.6
Baltimore Metropolitan Area			
Baltimore City	949,708	922,244	—2.9
Anne Arundel County	117,392	206,095	75.6
Baltimore County	270,273	490,533	81.5
Carroll County	44,907	52,649	17.2
Harford County	51,782	76,774	48.3
Howard County	23,119	36,152	56.3
Washington Metropolitan Area			
District of Columbia	802,178	763,956	—4.8
Montgomery County	164,401	338,675	106.0
Prince George's County	194,182	356,435	83.6
Arlington County	135,449	163,938	21.0
Fairfax County	98,557	262,488	166.3
Alexandria (City)	61,787	90,385	46.3
Falls Church (City)	7,535	10,158	34.8

to be 36,152 or an increase over the 1950 population, 23,119, of 56.3%. From 1952 through 1959 new dwelling unit permits increased from 292 to 632 per year or an average of 16.6% increase each year. It can clearly be seen that Howard County's rate of population growth is increasing greatly.

In estimating and forecasting Howard County's future population, the following factors were considered:

Howard County is in a strategic position between Baltimore and Washington Metropolitan Areas, two of the fastest growing areas in the United States, and it will increase in population due to the two expanding areas. See Map, "Howard County and Environs," page 15.

It is anticipated that Howard County will have a large amount of industrial growth which will generate population growth.

Howard County will be a choice location in which to live because of its natural beauty and high standard of development.

There is an abundance of useable open land in the County.

The eastern part of Howard County lies in a transportation corridor between Baltimore and Washington, thereby making commuting to two metropolitan areas possible from this location.

There are many methods of estimating the future population of an area. Several methods were used to determine Howard County's population which are spelled out in greater detail in the "Population Report," April 29, 1959. The following analysis methods were used to arrive at an estimate of Howard County's future population:

Comparison of the Howard County area to the larger area of which Howard County is a part—Maryland and the United States.

County growth in comparison with adjacent Metropolitan areas.

County growth in comparison with nearby suburban counties.

County growth based on building permits.

The results of these methods were evaluated and after analysis, a range of population for various years was determined.

TABLE IV

POPULATION PROJECTIONS FOR HOWARD COUNTY

1960	36,152—(U.S. Census)
1970	70,000—78,000
1980	110,000—130,000
1985	140,000—160,000
1990	170,000—190,000
2000	220,000—260,000

These population ranges are felt to be realistic and point up the need for continuing to carefully plan and develop the highways, community facilities and public services needed to serve this influx of population. Howard County has a great challenge before it to make provisions for such a population increase without destroying the beauty and other values of the County in the process.

Highways and Transportation

INTRODUCTION

The highway plan is a comprehensive long range guide for the development and construction of Federal, State and County highways within the County. The highway or circulation plan is one of the most important segments of the General Plan. A complete and integrated circulation system for the movement of people and goods within the County should be designed thirty to forty years in advance of need. The system should connect living, working, shopping and recreational areas. Provisions should be made for highways, railroads, public transportation lines, pedestrian walks, etc., depending on need. These various transportation movements should be planned on a segregated basis, yet each type of movement linked to each other. In other words, railroads should have connections with highways yet there should be no at-grade intersections where a conflict can occur between the different types of vehicles.

The highway plan was the first basic step in developing the comprehensive general plan. It provided the general framework within which the plans for future land use and community facilities were made.

In developing the highway plan, the Planning Commission gave careful thought and consideration to its effect on the existing and the future use of land. The highway plan may need to be adjusted from time to time. After developing the land use and community facilities plan, some changes were made in the original Plan of Highways adopted February 18, 1959. Numerous conferences have been held with the State Roads Commission, representatives of adjoining counties, the Baltimore Regional Planning Council and the Washington Regional Planning Council to coordinate the proposed highway network within the County with the highway system of the region.

CLASSIFICATION OF HIGHWAYS

The highway system has been divided into five categories: freeway, primary, secondary, collector and residential roads. The plan and report are concerned primarily with the first four categories. The definition and purposes of the various types of highways are given below.

Freeways

Freeways are designed to serve regional, interstate and county traffic with a right-of-way of 150 feet to 300 feet. Freeways will be able to carry fast moving traffic for long distances with a maximum of safety. They have been located to bypass towns, communities and employment centers, so as to allow for future expansion. Traffic will be able to enter and leave freeways only at predesignated points.

Primary Roads

Primary roads are designed to connect freeways and the large areas or cells that are created by freeways. They

will collect local traffic from the secondary roads and carry it either to freeways or to other areas of the County. They have continuity for long distances and generally run diagonally across freeway cells. The right-of-way widths will be 100 feet to 150 feet.

Secondary Roads

Secondary roads are designed to carry local traffic a relatively short distance and will connect communities located within freeway cells. Secondary roads will serve as connecting links between primary roads. Most of the traffic using these roads will be of local nature within a freeway cell. The right-of-way widths will be eighty to 100 feet.

Collector (Service) Roads

Collector roads connect residential roads to each other and to community facilities. Collector roads also take traffic to and from adjacent major roads. Collector and service roads keep residential streets free of through traffic. Collector Roads have a right-of-way of sixty to eighty feet.

Residential Streets

Residential streets are those that provide direct access to residential structures and serve a relatively small number of dwellings. Residential streets have a minimum right-of-way of fifty feet.

FREEWAY SYSTEM POLICY

Although the initial cost of constructing modern denied access freeways is higher than dual highways with crossovers and at-grade intersections, the increased capacity and safety of freeways will prevent future need of building or reconstructing additional parallel highways. Freeways also make it possible for drivers to travel to their destination in a shorter time and with much less expense than non-freeway type highways. It is most important, however, to make decisions as to route locations, acquire the land when it is reasonably priced and hold until ready for construction. The land can be leased for farming or some other temporary use to secure some return of public money during the interim period.

At-grade intersections and crossovers should not be allowed on any freeways except for emergency vehicles or for very special reasons. Except on interstate or federal freeways, acceleration and deceleration lanes should be constructed between interchanges for local traffic to enter and exit, but they should not be constructed less than one-half mile apart. Left turn movements against traffic should not be permitted at the entrance and exit points between interchanges.

When a freeway is to be used for express busses, special lanes, separated from the auto and truck traffic should be provided to give fast, uninterrupted service. The segregated lanes are essential to prevent a tie-up in case of accidents. At-grade intersections of roads with railroad tracks and with major highways should be eliminated. Pedestrian movements, where

there are appreciable volumes, should be separated from other types of traffic.

Despite the forecasts of things to come by some science-fiction writers, it is felt the automobile or a vehicle very similar in shape and size that will stay close to the ground will still be the primary form for the movement of people and goods for relatively short distances.

The borders of freeways should be densely planted with trees and shubbery, with occasional openings where there is

A typical freeway

Maryland State Roads Commission

a pleasant view or an opportunity to create an interesting space. On the whole, freeways should give an appearance of a tree lined path for fast moving vehicles that makes a neat break with nature. Residential areas and other land uses not wishing to see a freeway (schools, hospitals) when adjacent to a freeway or major road, should be well screened by trees and shrubbery and be able to carry on daily activities without being adversely affected or aware of the highway.

Freeways should maintain a wide median strip, heavily landscaped, to shield on-coming lights and reduce head-on collisions. When possible, the paving strips of the two roads should be constructed at different grade levels and separated. Along freeways, railings, traffic signs, and instructions should be simple, large, and easily comprehensible. Intersections should be simplified as possible, and instructions for turning movements should prepare or condition the driver and not startle or panic a driver by informing him, while moving at sixty

miles an hour, that he has a split second to make a decision for a turning movement.

Deceleration lanes from a freeway to a nearby service road should be fairly long (400 feet) to allow the storage of cars waiting to pass through an intersection. A good highway circulation movement must be based on a primary, secondary and collector road system feeding and supporting each other just as the circulation system of a human is based on a few arteries carrying a heavy volume of blood while numerous veins move a lesser volume. Some highway systems have failed to operate properly because a freeway system was constructed that did not have the primary and secondary road system to feed and support the freeway traffic. Too much traffic was forced to enter and exit the freeways at too few points where the roads were narrow and nearby areas congested.

FREEWAY PLAN

The freeway system as proposed for Howard County comprises six major routes, and for purposes of identification, are designated Interstate 70N (New Route 40) and Interstate 95 (New Route 1), Rt. #29, Savage-Cooksville, Brighton-Marriottsville and Dorsey-Glenelg. Two of the routes, Interstate 70N and 95, have a fairly fixed alignment. The third route, Rt. #29, utilizes in part the right-of-way and pavement of the existing road. The remaining three routes will require new rights-of-way.

The freeway network totals a distance of 87.6 miles, of which 11.8 miles (Route 40) has already been constructed. New construction will consist of 64.0 miles, while partial construction would consist of 11.8 miles (Route 29). Of this new construction, 19.5 miles will be included under the interstate highway program.

Included in this system are thirty-nine interchanges, including three existing interchanges to be modified and twenty-seven grade separations (bridges). The number of grade separations called for are considered as the minimum needed for good circulation of local and through traffic. No effort has been made to determine the number or size of drainage structures needed. However, an effort has been made to develop alignments which would keep such structures to a minimum. With respect to the general alignments of highways, various factors were considered in planning their locations, such as topography, property lines, existing structures, streams and rivers, existing roads, proximity to towns, and future land use proposals. Table V presents information on the individual highways.

Route 29

This proposed freeway is at present a two-lane highway, with a single paving strip on a 150 foot right-of-way. It serves as a main highway between the western area of Baltimore City and the northern part of Washington. Route 29 should have first priority since the area through which this highway traverses is rapidly developing. Unless it is soon constructed to freeway standards, it will become a highly congested and dangerous highway and will not serve the purpose for which

TABLE V
HOWARD COUNTY FREEWAY SYSTEM

TABLE V

Route	Grade Separations	Interchanges	Distance (miles)
Rt. 29	3	8[2]	14.9
70N (Rt. 40)*	5	7[1]	19.6
Savage-Cooksville	5	11	21.7
Dorsey-Glenelg	4	5	10.5
Brighton-Marriottsville	5	4	10.6
85)(New Rt. 1)*	5	4	10.3
TOTAL	27	39	87.6

* Interstate Routes

[1] Includes 2 existing interchanges to be improved.

[2] Includes 1 existing interchange to be improved.

it was originally designed. This route with its two lane single paving strip is now carrying over 10,000 vehicles a day. When the new section of this highway is completed, from Silver Spring to the Howard County line, a large increase in traffic over the entire route can be expected. The present plan calls for extending the highway north of its present terminus at Rt. 40 and having its northern section serve as a leg of the outer beltway around Baltimore. It is anticipated it will become a very important route serving the Baltimore-Washington Metropolitan Area.

Interchanges are proposed at the intersection with all primary roads and at Interstate 70N, Dorsey-Glenelg and Savage-Cooksville freeways. An interchange is also proposed at Johns Hopkins Road because of the proximity of the Johns Hopkins Laboratory and proposed industrial and commercial developments in that area. Grade separations are to be constructed where the freeway crosses Md. 108, Md. 144 and Md. 99.

It is felt that if this highway is not constructed as a freeway, the need for an additional road parallel to Route 29 would undoubtedly develop in the near future.

Interstate 70N (New Route 40)

This freeway is designated as an interstate highway and is a major highway serving the east-west movement of traffic in this region. This highway should be constructed to interstate highway standards as soon as additional or new rights-of-way are acquired and funds are available. The proposed new section of this route, from its connection with existing Route 40 west of Marriottsville Road to the Baltimore County Beltway, will greatly relieve the heavy traffic now being carried on Route 40 from Pine Orchard to Baltimore City.

The alignment will utilize the present roadway of Route 40 from the west end of the County to a point approximately one mile east of West Friendship and then it will follow a new alignment into Baltimore as shown in the Plan. Interchanges will be located at junctions with Md. Rt. 94, Savage-Cooksville Freeway, Md. Rt. 32, Rt. 40 east of West Friendship, Brighton-Marriottsville Freeway, Rt. 29 and Rogers Avenue. Grade separations will be constructed where the freeway crosses designated secondary and primary highways.

Savage-Cooksville Freeway

This route is considered to be a very important highway. Not only does it extend practically the full length of the County, but it serves as an artery carrying Howard County residents between their homes and existing and proposed employment areas in Howard County and Anne Arundel County. The highway will serve traffic going to Annapolis and recreational areas in Anne Arundel County and to Eastern Shore via the Bay Bridge. The highway is planned to be extended north to serve areas around Westminster and Gettysburg, and will ultimately connect with the Pennsylvania Turnpike. There will be connections with Routes 70N, 95, 29, Brighton-Marriottsville Freeway and Dorsey-Glenelg Freeway within Howard County as well as other major routes Southeast of the County. Interchanges will be located at the above junctions and at intersections with primary roads as shown on the Plan. Because it is anticipated that there will be a heavy flow of traffic entering and leaving the freeway at its junction with Brighton-Marriottsville Freeway, it is suggested that a directional interchange be provided. Access to the freeway for Clarksville traffic will be provided at the junction with Rt. 108.

Dorsey-Glenelg Freeway

The Dorsey-Glenelg freeway will serve traffic within the central portion of Howard County and the traffic traveling from Howard County to the region immediately south of Baltimore, Friendship Airport, Glen Burnie and connections with roads to Eastern Shore. The segment east of Route 29 will serve as a leg of the outer beltway presently planned, which surrounds Baltimore. Within Howard County the Dorsey-Glenelg will provide an important connection to the Harbor Tunnel. This highway will also provide a good connection to existing and proposed large employment centers in Howard and Anne Arundel Counties. It will be a freeway from the Howard-Anne Arundel border to the Brighton-Marriottsville Freeway. From that point to Glenelg, it will be a primary road and will utilize the present Folly Quarter Road as one leg of the highway. Full interchanges should be provided at connections with Routes 95, 29 and partial interchanges as shown on the Plan. Grade-separations will also be provided where shown on the General Plan.

Brighton-Marriottsville Freeway

This route is an extension of the Northern Parkway planned to carry Howard County traffic to and from Washington, D.C. and northeasterly into Baltimore County. It runs in a northeasterly direction across the county and connects with Interstate 70N. This route will continue northeasterly into Baltimore County in the vicinity of Marriottsville as a primary road and connect with the Baltimore Outer Beltway. The present Marriottsville Road should serve as the north bound leg of the new road. It is felt that in the future the area surrounding Liberty Reservoir will become a large recreational area and this highway will be needed to serve traffic going to and from it.

The freeway will serve motorists traveling from Washington who wish to reach the western and northwestern part of the Baltimore Metropolitan area and, in turn, motorists traveling from Baltimore to the north and northwestern areas of Washington. This freeway will also be a convenient route for travel between the Baltimore area and the proposed Chantilly Airport. In addition, any one from Washington wishing to travel north could do so on this highway by merely taking the Savage-Cooksville Freeway where it connects with the Brighton-Marriottsville Freeway.

Interchanges and grade separations will be provided where shown on the General Plan.

Interstate 95 Freeway (New Route 1)

This proposed freeway has been tentatively designated as a leg of the interstate highway system and will serve traffic traveling between Washington and Baltimore and points north and south. The alignment as shown has been tentatively set by the State Roads Commission.

It is proposed that these will be full interchanges at the intersections with the Savage-Cooksville and Dorsey-Glenelg Freeways and partial interchanges at the intersections of Md. Routes 175 and 216.

These partial interchanges are definitely needed to serve the large employment areas and anticipated population increase within the vicinity of the freeway. If the highway cannot serve this need, then the advisability of locating this route within Howard County is greatly questioned.

Grade separations will be provided as designated on the General Plan.

Summary

It is recognized that the proposed freeway system represents an enormous investment. However, it is believed that when the cost of acquisition and construction are spread over a period of years, it will be economically feasible to construct the highways. Future right-of-way costs will be kept to a minimum through active planning, which will make it possible for the State Roads Commission to spend a greater portion of funds on construction. It is forseeable that agreements can be arranged with the State Roads Commission and the Howard County officials to provide for the transfer of some present state roads to the County for maintenance upon construction of some of the proposed freeways. It will be the responsibility of the State Roads Commission to construct the freeways. The cost of interchanges and grade separations as compared to the cost of at-grade intersections will be higher. But the increased safety at higher speeds and the increased capacity in traffic volume made possible by the construction of such interchanges and grade separations will certainly justify the additional expenditure. It will not be necessary to construct all of these structures immediately, but provisions should be made for their future construction by reserving adequate rights-of-way. It is felt that if the freeways as planned are constructed, the proposed highway

system will serve the County efficiently for at least thirty to forty years after its ultimate completion.

PRIMARY ROADS

The primary roads have been designed to connect freeways and the large land areas or cells created by freeways. They collect traffic from collector and secondary roads and carry it to freeways or to other areas. The primary roads have continuity for long distances and where possible, generally run diagonally across freeway cells in order to supplement major traffic flow of the freeway. They also serve major industrial and large employment areas within the General Plan.

The primary road should be a dual lane highway with a wide median strip. Rights-of-way should be 100 to 150 feet. Only in urban concentrations or in localities where it is absolutely necessary should the right-of-way requirement be reduced.

While the present or immediate future needs may only justify the construction of two lanes, adequate provision should be made for an ultimate of four lanes at the time of design and right-of-way acquisition. The intersection of primary roads with each other should be channelized and interchanges provided where primary roads intersect a freeway. Although the amount of traffic needed to justify an overpass or interchange may not develop for ten or fifteen years, the additional land required should be acquired at the time the right-of-way is purchased for the intersection.

Every attempt should be made to utilize existing roads and if trees line an existing highway, a new paving strip should be constructed on one side of the trees and the existing row of trees used as a median strip.

The primary highway system represents a total distance of approximately 127.7 miles. Of this total, twenty-three miles meet the standards set for primary roads. The remaining 104.7 miles should be constructed or improved as needed.

Route 1, which is maintained by the State Roads Commission, is considered adequate as it now exists. Route 32 is being improved from Sykesville south to Route 40 and should suffice for any future development in that area. In addition, plans are being prepared to improve Route 32 from Route 40 to Glenelg with provisions, ultimately, for a dual lane highway. Existing Route 40 east of West Friendship is at present a dual lane highway and needs no further attention, except for continuing maintenance. Presently, the State Roads Commission is considering improving Route 216 between Laurel and Highland, and constructing, ultimately, a dual lane highway. Also future State Road Plans call for the dualizing of the section of Route 94 running through Howard County.

Most of the proposed primary roads would be the responsibility of the State Roads Commission. Where primary roads are existing State highways, the State would naturally be responsible for making improvements as money becomes available. Where a primary road is indicated on an existing county road or on a proposed new right-of-way, the County would reserve the right-of-way and seek to obtain State funds for

construction at a later date in accordance to need. The initial construction of a primary road would consist of two lanes with the third and fourth lanes being built at a later time when the traffic warrants the additional lanes.

It is anticipated the County's role in the construction of any segments of the primary road system would be very minor for many years. Some of the roads shown as primary roads would have the function of a primary road as far as its importance as a route, but due to conditions along the road, may never become a dual highway.

SECONDARY ROADS

Secondary roads generally connect collector roads and carry traffic to primary roads. They are of relatively short lengths and are designed to serve local traffic of a large community. They will have a right-of-way of eighty to 100 feet and contain two to four lanes with a narrow median strip of ten to sixteen feet. For practical reasons, they will follow the present alignment of existing roads with some modification of curves and grades in order to eliminate below standard "sight distances" and hazardous conditions. It will be necessary, in most instances, to acquire additional rights-of-way as the majority of existing County roads are only thirty to sixty feet in width. It is expected that these roads will be the sole responsibility of the County to improve and maintain. The acquisition of rights-of-way and construction of new secondary roads would be the responsibility of developers and the County. In many cases developers would dedicate the right-of-way and take part in the initial construction of the highways where it affects their development. The secondary system represents approximately 121.7 miles of roads.

COLLECTOR ROADS

Collector roads connect residential streets and carry traffic to secondary and primary highways. They also take local traffic to and from freeways. They should have from twenty-four to thirty-six feet of paving, two to four moving lanes with a right-of-way of sixty to eighty feet. Collector roads serve schools and various public facilities generating large traffic movements.

Collector roads, when acting in the capacity of a service road for a freeway, should be located generally parallel to and several hundred feet from the freeway being served. Residential structures, as well as some types of commercial properties, should back on to freeways and primary roads and front on the collector road.

RESIDENTIAL STREETS

Residential streets should have, in general, a winding, complex and quiet character. They should carry only local residential traffic and necessary service vehicles needed in residential areas. The right-of-way should be from fifty to sixty feet. They should feed into the collector street.

Residential streets should blend into the natural terrain, and not look like small freeways. Where possible, they should have the appearance of country lanes, with grass running to the edge of the pavement. Off-street parking, of at least two cars per dwelling unit, should be required to keep the roads clear of parked cars except in the case of important occasions and large

gatherings. Curbs should be used only where necessary to facilitate the flow of storm water or for the protection of pedestrians.

ROADS AND AESTHETICS

Strip or ribbon commercial and industrial developments along highways should be discouraged and prevented. Existing strip zoning should be eliminated whenever possible. Commercial centers should be developed on a planned basis, in small groupings, with each grouping separated from residential properties by buffers. Billboards should not be permitted along freeways and only along primary and secondary highways at certain appropriate locations where there is a commercial development. Where billboards are permitted they should be heavily taxed as they do much to spoil the beauty and character of an area. Billboards should not be permitted on or adjacent to any federal or state highways of a non-access nature.

Gas stations and other commercial facilities should be carefully integrated with the natural terrain and not stand out as a garish, over-sized juke box with gas pumps, as vast numbers of stations are presently displayed. Identification signs should be small and simple and should not be flashing and blinking to distract the motorist's attention. The gas station structure, if part of a large commercial development, should be of similar building material, texture and design, and be unobtrusive.

Directional road signs should be simple, abstract, easily understood, pleasing in appearance and sensible in scale. They should be designed to be acceptable in any residential or commerical setting, as well as in the countryside. Signs containing lengthy instructions to motorists are not practical nor safe for motorists moving at great speeds on heavily traveled highways. Signs must be very quickly comprehended, which can be accomplished better by abstract symbols. Experience has shown that abstract symbols best meet the need of immediate comprehension.

Wherever possible, the surface of roads should be used for various road signs; directional, speed limit, etc. Signs placed on posts should be kept to a minimum. Where signs are necessary to advertize churches and various civic organizations, they should be grouped and be of standard size and shape.

PUBLIC TRANSPORTATION

Howard County and adjacent jurisdictions should be served by a metropolitan transportation system and should be a member of a metropolitan transit authority or board. This is important if the people of Howard County want a voice in planning the system and also to be able to represent the views of constituents as to desired service and routes.

Public transportation vehicles; busses, trains, etc., must travel safely at high speeds, have comfortable seats, have little or no standing room, be clean and colorful, and give frequent service. Service should be available within a quarter of a mile to the majority of the population to be served and the stops should have well designed shelters for protection against adverse weather, with ample seating and waiting space. Each stop should have a map of the route and a time schedule for

that particular station. The schedule should indicate the time the transporting vehicle is to stop at each station. This should be true for the smallest and most remote station. Vehicles, especially busses, should be provided with special lanes, separated from the other type vehicles. If an accident should occur on the regular traffic lanes, the express vehicles could continue moving and not be delayed.

Double-decker busses for express and local trips should be considered as they carry more passengers per vehicle, provide an interesting perspective to passengers, thus making traveling more enjoyable.

As the Baltimore region has numerous old rail and commuter lines that have been abandoned or have limited use, consideration should be given to converting these to public transportation channels for express streetcars or busses.

Elevated structures should be avoided whenever possible unless they are very carefully designed and are graceful and attractive in appearance. Even if well designed, elevated structures are seldom an improvement to the skyline and are more often a blighting element to adjoining property. It is best, even at the high cost of excavation and utility relocation work, to depress highways and surface transportation routes in developed areas. By depressing them they are removed from sight, the sound of traffic is essentially reduced and there is less blighting effect from such a road.

With the mass use of the automobile and with the dispersal of employment centers, retail shopping and residential areas, it is very difficult to establish an economical transportation system that provides good service. Thirty or forty years ago the movement of goods and services was relatively simple. The movement of people and goods is, and will continue to be, very complex. This is due primarily to the automobile and the truck, which give so much flexibility. The public transportation routes and facilities should be flexible. This is difficult to accomplish with fixed rail facilites.

Fixed rail routes have a future in carrying people from high density residential areas to a central business district or to very large employment centers. The express bus gives greater flexibility with less investment. A bus can move on a freeway at high speeds and turn off to a community and operate on local streets at slow speeds. If there is a change in the population causing a change of demand for service, it can be met very readily with a bus system.

Local regulations should require exhaust after-burners and better mufflers for busses to help eliminate the fumes and noise they cause. Consideration should also be given for operating busses by electricity using storage batteries for the source of power. Advances in batteries should soon make this feasible. Electrically operated busses would eliminate offensive fumes and noises now common in bus transportation.

AIR TRAVEL

It is anticipated that air travel will be increasingly used by the general public, but primarily for long trips of over 200 or 300 miles. Air service should become better and more efficient but it will probably never achieve the regularity of surface vehicles. Weather and safety will be the determining factors.

The land in the close vicinity of airports, and along the glide path, should be held as agricultural land or open space or put into an industrial use not particularly disturbed by aircraft noises. Residential areas should not be permitted close to air fields, especially with the advent of jet planes.

A privately owned county airport will probably be needed in ten or fifteen years in the western part of Howard County. The airport should be located several miles away from any urban concentrations. There will probably be an increasing demand for an airport for pleasure and commercial flights.

It is not anticipated that much of the population will be transported for short distances by airplanes. Fast, efficient public transportation between airports and urban concentrations should be provided with helicopters or similar types or aircraft.

CONCLUSION

By having the highway plan, a part of the comprehensive General Plan, the public and all concerned are informed of the location of future roads. The highway plan makes it possible for the County to prepare a capital improvement program to implement the plan. Money can be budgeted to construct segments of the highway plan needed the most. The location of shopping areas, homes, schools, parks and other public improvements can be determined and constructed with the knowledge and assurance that their homes and businesses will not be threatened by a new highway.

As stated in the introduction, the highway plan can be adjusted where there is a need to make changes. The adoption of the highway plan does not commit the County to build any roads by a certain date. It is a guide as to where highways should be constructed as money becomes available. The highway plan is an important element in making it possible to achieve orderly growth in the County. With a highway plan, subdivisions and private and public construction projects can be located and developed in proper relationship to existing and future highways.

The plan also informs the public of all highways proposals that are known to the Planning Commission. The Planning Commission will endeavor to keep the citizens of Howard County informed of any new highway proposals.

Residential

As shelter is one of the primary needs of people, the largest percentage of any one type of land use has been proposed for residential purposes. It is an important element in the General Plan. Most of the activities of a family take place in residential areas. A wide variety of housing types for different income and age groups should be available to both individuals and families. Housing is necessary for people working or residing in the County and for transients and visitors. Residential areas should have an attractive physical appearance, and be relatively quiet and secluded in character.

EXISTING RESIDENTIAL PATTERN

According to the preliminary 1960 census figures, there were 36,152 people in April, 1960, in Howard County. Table VI indicates the population by election districts.

TABLE VI

POPULATION OF HOWARD COUNTY
1960 Preliminary Census

Election Districts	*Population*	*Housing Units*
1	7,262	2,003
2	9,575	2,769
3	2,721	729
4	3,309	1,020
5	4,119	1,159
6	9,166	2,631
Total	36,152	10,311

From 1952 to January, 1961, the most residential building permits, 1,567, were issued for the 2nd District, followed by the 6th District with 916, 5th District with 576, 1st District with 533, 4th District with 214 and the 3rd District with 175. A total of 3,969 Dwelling unit permits were issued from 1952 to January, 1961. See Table VII, "Residential Dwelling Permits Issued".

TABLE VII

RESIDENTIAL DWELLING PERMITS ISSUED

*E.D.**	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*1960*	*Total*
1	67	52	61	47	60	36	86	71	53	533
2	96	88	118	105	170	214	276	285	215	1,567
3	11	8	28	21	25	22	16	23	21	175
4	27	27	23	21	23	17	13	32	29	214
5	35	24	45	50	70	102	68	91	81	576
6	56	81	49	110	150	111	105	130	124	916
Total	292	280	324	354	498	502	564	632	523	3,969

*Election District (Source: Building Engineer)

Developed Land

Of the 160,640 acres in Howard County, 18,267 acres are considered to be "developed". This is 11.37% of the total area of the County. The term "developed" refers to nonagricultural land or land utilized for uses such as residential, commercial,

industrial, government, schools, churches, recreational institutional, cemeteries, roads and right-of-ways. The "developed" residential land totaled 4,264 acres. This includes only land utilized for residential purposes, house, yard and road serving property. The 4,264 acres amounts to 2.65% of the total area of the County and 23% of the total developed area.

Subdivisions

From 1953 to June 1960, 188 preliminary subdivision plans were approved by the Howard County Planning Commission. The land involved in the approved preliminary subdivision plans which had not been developed as of February 10, 1960 totaled 5,169 acres.

RESIDENTIAL LAND USE PLAN

Residential areas have been carefully planned in relation to existing and other proposed land uses, community facilities and highways in the County.

Most of the residential areas in the plan have been separated from commercial, industrial and large employment centers by major highways, parks or open space. Dwellings should not be located in low areas subject to flooding, or where soil is difficult to drain or grade. The residential land should be reasonably easy to prepare for construction of houses, roads, utilities and parks.

COMMUNITY AND NEIGHBORHOOD AREAS

For planning purposes community and neighborhood areas have been formed primarily for the purpose of determining the location and number of schools. The size of a community area was based on an area's ability ultimately to support a junior high school containing 540 to 750 students or from 18 to 25 classrooms. The population to serve the junior high school will range from 3,000 to 4,500 families or 12,000 to 18,000 persons.

The smallest planning unit, the neighborhood, contains a sufficient area or population large enough to support an elementary school having from 400 to 800 students. The population varies from 700 to 1,250 families or 2,800 to 5,000 persons. The neighborhood unit is primarily a physical concept although the school will foster certain social activities. The neighborhood is thought of primarily as a residential area containing churches, schools, parks, recreation areas, and other uses and facilities normally associated with a residential area.

BUILDABLE LAND ANALYSIS

Before the residential land use plan could be developed, a study was made of the "buildable" and "unbuildable" land within the County. All rivers, streams, flood plains and poorly drained soils were indicated on maps. Steep slopes from 15% to 25%, and over 25% were indicated on the same maps. A second map or overlay was put over this and the land considered to be "buildable" (usable for intensive residential, commercial and industrial development) and "unbuildable" was indicated. The stream valleys, flood plains and much of the steep slopes were then proposed for park use if the land could be developed into a park "system". Some isolated rough topography was marked as "buildable" if it was small in area and could be graded so as to be of use to a developer. The remaining "buildable" land was proposed for various land uses including residential varying in lot sizes or zones from R-90

(90,000 sq. ft. lot) to R-A-2 (Apartments) based on the planning policy developed for Howard County. (See *Planning Policy and Design Concept for Howard County,* Howard County Planning Commission.) The areas that would not be feasible for the construction of water and sewer facilities within the next thirty to forty years had an important bearing on the residential land use plan.

Upon deciding on a desirable residential lot size or density (R-20, 20,000 sq. ft., equivalent to 1.5 families per gross acre) for a particular area, the dwelling units or family capacity could be obtained by multiplying the total acreage of "buildable" land times the number of families per acre. The total population could be estimated by multiplying the number of families times a number of persons per family. The total number of public school children anticipated within an area can also be estimated by multiplying the school-age children per family (.5 elementary, .3 secondary) times the total number of families. Table VIII illustrates this analysis process.

TABLE VIII

POPULATION AND PUBLIC SCHOOL CHILDREN ANALYSIS PROCEDURES

Total land area		1,000 acres
minus "Unbuildable" land (100 acres)	−	100
equals "Buildable" land	=	900 acres
Average number of dwelling units per acre		
Residential zone for area—R-20 (20,000 sq. ft.) equivalent to 1.5 dwelling units per acre (gross)		1.5
Dwelling Unit capacity (Dwelling Units within area)		
1.5 x 900 acres	=	1,350
(Dwelling units per acre times buildable land)		
Population capacity (Persons within area)		
3.6 x 1,350	=	4,860
(persons per family times number of dwelling units)		
Public Elementary School children capacity (Within area)		
.5 x 1,350	=	675
(Elementary school children per family times number of families or dwelling units)		

The above process was used in determining the location and number of public schools proposed in the general plan. The data collected from the study outlined above was of great assistance to the Metropolitan Commission in developing the water and sewer plan for the County. Residential densities or zones must be determined in order to design an adequate and economical water and sewerage system. If residential areas are allowed to increase in densities (persons per acre) without purpose and not in conformity to the General Plan, Howard Countians could be forced to pay higher taxes to replace or to install additional water and sewer lines.

RESIDENTIAL ZONES

Table IX, "Land Allocated to Residential Zones", describes the amount of residential land or zones in the General Plan by acres. The map entitled "Residential Zoning and Development

Stage Plan", which is part of the General Plan, illustrates the residential land use distribution pattern by zones.

TABLE IX LAND ALLOCATED TO RESIDENTIAL ZONES

Single-family lot sizes (90,000 sq. ft. to 12,000 sq. ft.)	Amount of Land (Acres)
R-90 = 90,000 square feet	31,317
R-40 = 40,000 square feet	22,152
R-20 = 20,000 square feet	49,218
R-16 = 16,000 square feet	6,187
R-12 = 12,000 square feet (Two-family dwelling permitted in R-12 zone)	5,332
Apartments	808
Trailer Parks	193
Total	115,208

In general the location of residential areas has been determined because of existing topography, soil condition, water and sewer expansion plans and existing or planned land use for the County. The various residential zones have been proposed in the General Plan based on the following policy:

1. The Apartment zones, (highest density) should be located adjacent to shopping and commercial centers.
2. The highest density single family residential zones, R-12 and R-16 (originally proposed in General Plan as R-15), should be located near the apartment zones and employment centers where water and sewer are available.
3. The low density zones, R-20, R-40 and R-90 should be located away from commercial and industrial areas and other major traffic generators.

A total of 115,208 acres of residential land has been proposed and distributed among the following zones in the General Plan: R-90 (31,317 acres); R-40 (22,152 acres); R-20 (49,218 acres); R-16 (6,187 acres); R-12 (5,332 acres); R-A-1 and R-A-2 (Apartments—808 acres) and Trailer Parks (193 acres).

The "Residential Zoning and Development Stage Plan", Map (located in map pocket), indicates the areas of the County to be developed with water and sewers by stages and the areas not planned to be developed by water and sewers in the forseeable future.

In the first stage there are four areas proposed to be developed with water and sewer. These are Ellicott City, Elkridge, Savage and Laurel. The other sections of the County would develop by stages as indicated on the plan.

Residential building activity should be encouraged in the eastern portion of the County where water and sewerage facilities will first be available. Residential areas should develop in a compact manner and expand gradually to the west as water, sewer, schools, roads and other community facilities are constructed. Scattered residential developments make it

difficult and expensive to provide schools, school bus transportation, utilities and other public and private services. A large segment of the western part of the County will not be sewered for forty to fifty years. These areas, especially where there is good agricultural land, have been proposed in the plan as an R-90 zone. The higher density residential areas have been planned in the east where utilities and community facilities will be available in the forseeable future.

GARDEN AND ELEVATOR APARTMENTS

Nine apartment areas totaling 808 acres have been planned in clusters near shopping or commercial centers where transportation facilities and other public services are or will be nearby.

It is desirable for apartments to be near shopping centers as the people who live in apartments have a greater desire to locate close to centers of activity and transportation facilities. Apartments are considered to be very appropriate for the needs of single people, young married couples, families with children who cannot yet afford a single family house and older couples who have no desire to keep up a large home.

Garden Apartments

Two-story garden apartments should be sited in a manner to create imaginative plazas of open space and have adequate off-street parking. Each apartment should be provided with an enclosed private outdoor patio or a balcony. The apartment buildings should form large enclosed or semi-enclosed spaces or courtyards of open space shared by all residents. Small play areas for young children should be located in appropriate places. If there is a large number of apartments, an area should be set aside for some recreation facilities such as a tennis court or a swimming pool.

Elevator Apartments

The elevator apartments should be from nine to thirteen stories high. Elevator apartments can provide an outstanding view of surrounding landscape that cannot be obtained in one and two-story structures.

By having elevator apartments it is possible to preserve more open space. The higher the building the greater space that should be provided between buildings. The density should range from twenty to thirty dwelling units per gross acre. By having some elevator apartment houses within the County, more people could be housed on less ground thus reducing the demand to utilize agricultural and wooded areas for development. Approximately 80% to 90% of a project would be open land. The higher density permitted in these developments would greatly help to perserve existing open space.

Studies in Montgomery County, Maryland; Arlington County, Virginia, and other jurisdictions indicate that elevator and garden apartments more than pay for the public facilities and services they receive. From a tax viewpoint, it is felt elevator apartments should operate to the County's advantage.

Although elevator apartments may not be in demand for a few years, space has been reserved for them in the General Plan.

SINGLE-FAMILY DWELLINGS

A single-family house will undoubtedly continue to be the basic dwelling unit for most families in Howard County as it provides the room and the privacy that most families desire.

Single-family dwellings, where possible, have been planned in relatively quiet areas away from heavy commercial and industrial areas and other traffic generators.

The highest density or smallest lot zones, R-12 and R-16, have been planned adjacent to apartment areas and in the vicinity of employment centers. The R-20 zone, the standard lot size, in general has been planned next to the R-16 zones and away from the main traffic generators. The availability of public water and sewerage facilities greatly influenced the distribution pattern for the various single family residential zones. In most cases all zones from R-A-1 (Apartments) to R-20 are in the areas to be developed for water and sewers. The R-40 zone has been proposed where there is very rough topography, where one acre developments have begun or where water and sewers will not be provided for fifteen to twenty years or at great expense. The R-90 zone has been proposed in areas: not planned to be developed with sewers in the foreseeable future; to provide a buffer between the Baltimore-Washington Metropolitan Area; to protect the Patuxent River watershed and reservoirs; and to preserve agricultural land

It should be kept in mind that single family houses use more land area than other types of housing and should be planned carefully to avoid removing any more agricultural land and open space than is necessary. The cost of providing utilities to single family structures is also higher than for other types of housing.

It is felt a variety of single-family lot sizes should be available to provide a choice. The legal establishment of the various residential zones outlined will make it possible for each existing and potential home owner to invest knowing the possible or potential use of adjoining property and to select the area best suited to his economic position and needs. The proposed lot sizes and recommended basic standards for each residential zone are outlined in Table X.

Residential Street

TABLE X

RESIDENTIAL LOT AREA AND YARD REQUIREMENTS
ZONES R-90 TO R-12

	R-90	*R-40*	*R-20*	*R-16*	*R-12*
AREA	90,000	40,000	20,000	16,000	12,000
TYPE HOUSING	S-F	S-F	S-F	S-F	S-F T-F
UTILITY REQUIREMENTS	—	—	—	Public W&S	Public W&S
WIDTHS	200	140	100	85	75
FRONT YARD	100	75	50	50	50
SIDE YARDS					
Interior (Each)	30	25	15	15*	15*
Corner	60	50	50	50	50
REAR YARD	60	50	50	40	40
Adjacent to Expressway or Primary Road	100	100	75	75	75

S-F—Single-family
T-F—Two-family
W&S—Water and sewer
*or 25′ total

SITE DESIGN IN RESIDENTIAL AREAS

Streams should be utilized as park strips and pedestrian walks. Where possible schools should be located next to stream valley parks. The park strips should be designed to permit children to walk to school without crossing any, or only a few, streets. Whenever possible, pedestrian walks should be separated from vehicular traffic movements.

It is very important that all types of dwellings, and especially single-family dwellings, be carefully placed on a site in order that each building will:

1. Be properly related to the topography, to the street, and to adjoining buildings. Pleasant spaces should be created by the siting of buildings.
2. Provide usable outdoor living space for family needs. A large portion of this outdoor space should be private in nature. Small lots should be designed with open front yards and enclosed private back and side yards. The yards can be enclosed by plant screening, fencing or both.

As the County becomes more and more urbanized it will become difficult, yet very essential, to have indoor and outdoor privacy. The home should be planned as a retreat where one can withdraw from public scrutiny if one so desires.

Telephone and power lines in residential areas should be put in cables and placed underground. Overhead wires and cables are very unsightly and do much to make subdivisions unnecessarily ugly. Trees are hacked and mutilated into strange shapes to protect the wires from encroachment. Frequently trees, long in existence along a road, have wedges cut into them by new lines being constructed for subdivisions. The residents who have the cables put underground, of course, should be expected to pay for the extra service.

Park, Recreation and Agriculture

Howard County's existing rural countryside will continue to be under strong pressure to be developed for nonagricultural purposes for many years. The demand for land to serve the expanding population will greatly effect the existing open space and agricultural land in the County. There are other forces in operation that make it necessary to consider future needs for parks and open space at this time. There is now greater leisure available to large groups of the population. This has been possible because of advances in business and industry, the increasing longevity of people, shorter working hours, and retirement of a large segment of the population at an earlier age than formerly. These forces and trends point out the great need for acting soon to develop a park system for our present and future generations and to maintain and improve our physical environment before land is lost to developments.

Little thought has been given, until recently, to the fact that our countryside is being depleted at an astonishingly fast rate. Growth from Baltimore and Washington is rapidly engulfing forests, farms, and, in general, the innate beauty of the countryside of Howard County that was once taken for granted as being here for posterity. Because city and suburban growth takes place very gradually through the construction of hun-

Patuxent River

Maryland Department of Forests & Parks

dreds of small developments and projects, its net effect on existing amenities is sometimes not noticed until the catastrophe is complete. Trees are suddenly down and buildings up. Through the planning of parks and open space it is possible to preserve much of the natural beauty and charm of Howard County. With the trends toward larger and more complex cities and communities, life in general becomes more difficult and complex, and the pressures on people greater. Parks and natural scenic areas, therefore, take on more significance. For reasons not easily explained, most people seem to achieve a great deal of pleasure and satisfaction from being in natural surroundings. Unfortunately, there is much evidence that cities and communities become dull, and often depressing and monotonous when concentrations of urban development cover too large an area, are uncontrolled, and have little or no trees and greenery. Parks can be a very effective tool in breaking up large building concentrations, guiding growth in desirable directions, and in general controlling development. Parks and open space are also desirable as buffers or green wedges between communities and large cities.

Open space is also needed to provide watershed control in order to prevent soil erosion and flooding. If watershed areas are not protected, new housing developments can greatly increase the flow of surface water into streams.

PARK AND RECREATION POLICY AND PLAN

At the present time there are 6,272 acres of land used for park or recreational activities, public and private, in Howard County. Most of this land, 5,761 acres, is owned by the State of Maryland and the Washington Suburban Sanitary Commission. The land owned by the Washington Suburban Sanitary Commission is in two large Reservoir areas, Rocky Gorge and Tridelphia, along the Patuxent River. Parks have been established by the State Department of Forests and Parks along the Patapsco River and Deep Run.

In the General Plan a total of 25,567 acres have been proposed for parks, and recreational activities. Of this total 24,132 acres have been proposed for parks, open space and recreational activities. Of the total 24,132 acres, approximately 15,000 acres are recomended for the State Park system and 9,000 acres for the County park system. As the park plan is an ultimate plan and is based on the ultimate development of the County, approximately 5,000 acres of land in the park plan is not anticipated to be needed for over forty years. This leaves about 19,000 acres that are needed in the next thirty to forty years for the County and State park system. The remaining 1,435 acres of land are allocated for: cemeteries, 236 acres; clubs, camps and community centers, 820 acres; and nurseries, 379 acres.

The park and open space plan has been designed to eventually provide some active recreational facilities. A park and recreation system should provide facilities for all age groups according to need. The land for the system should be reserved or acquired years in advance of actual need and before active development of an area. Land obtained for parks should be not only for active recreation, but for passive use as well. Once

land has been acquired for park and open space purposes, scenic and historic features can be safeguarded.

In planning the park system for Howard County, it should be remembered that parks and open spaces of varying sizes and functions should be reserved to serve the people of the:

1. Region, or large segment of the State
2. Howard County as a whole
3. Towns and neighborhoods within the County

The large river valleys have been planned and should be reserved in Howard County for the following purposes:

1. Green belts or open space "breaks" between the Baltimore and Washington regions and communities.
2. Flood and watershed control.
3. Preservation of water resources.
4. Soil conservation.
5. Future rights-of-way for sewer lines.

LARGE RIVER VALLEY PARKS

Large rivers and other scenic areas of a fairly large dimension have been proposed as regional or state park and should be acquired by the State.

Howard County has two large rivers, the Patapsco and the Patuxent, and one smaller river, Deep Run, which have been planned as regional parks. The land along the Patuxent and Patapsco Rivers should be acquired by the State from the source downstream at least to Laurel and Elkridge, respectively. The proposed parks include the entire lengths of the Patapsco and Patuxent where the rivers border Howard County. Deep Run should also be acquired as a State Park, at least where it runs between Howard County and Anne Arundel County. Howard County would have the great asset of practically being surrounded by a State park.

The proposed park areas for the Patuxent and Patapsco Rivers will serve the entire County and many other jurisdictions. They could provide recreational activities such as sailing, boating, fishing, hiking, and horseback riding that are not usually available in smaller parks. Most of the Patuxent and Patapsco river park area would be valuable just for the view and would not have to be "developed" for active recreational purposes. The two proposed parks, as well as smaller parks, will greatly help the County maintain its taxable base and property values at a high level over a long period of time. Numerous studies indicate residential property near parks usually has a much higher value and maintains its value longer than property not adjacent to a park.

An agency primarily concerned with recreational activities should assist in developing recreational facilities in the Patapsco and Patuxent river parks.

A few fine restaurants, having indoor and outdoor eating facilities should be encouraged to locate adjacent to areas of scenic value such as the Patapsco and the Patuxent where there are exceptionally fine views. Any plans for such restaurants should be approved by the appropriate public agency and be carefully regulated to insure adequate control of location, architecture, signs and parking.

Game reserves, conservation and natural wilderness areas should be reserved in order to maintain the innate beauty and character of areas in the County and to preserve wild life and natural resources.

SMALL STREAM VALLEY PARKS

The small stream valleys in the County have been planned and should be reserved as parks for reasons similar to those for the large river valleys:

Green belts or buffers between neighborhoods, commercial and industrial areas.
Park and open space of a passive nature.
Future rights-of-way for sewer lines and other utilities.
Flood and watershed control.
Soil conservation.

The stream valley parks have been planned as long continuous parks and should be acquired by gift, donation or purchase if necessary. It is felt best to have numerous small parks distributed throughout the County within a short walking distance of families than have one or two large parks to which one must drive several miles to see and enjoy.

Stream Valley Park

It is not anticipated that these small stream valley parks will create any expensive maintenance problems. Experience in other jurisdictions indicates maintenance of stream valley parks is not normally a problem and the cost is very little for the benefits received. If the stream valleys are not acquired at an early date, the County will be forced at a later time to condemn and purchase property along the streams for future sewer lines and park use. As surface water runoff will increase as developments increase, more space along stream banks is needed for the greater flow of water. If space is not reserved for the future stream flow, storm drains would need to be built at tremendous expense.

The dedication of stream valleys to the County is an advantage to the County and to the developer. The County secures

needed land as open space for park use and future rights-of-way for utilities, etc. The developer does not have to build an expensive storm drainage system nor pay taxes on land he normally cannot develop.

AGRICULTURAL LAND

At least part of our best agricultural land should be protected to insure that the County will have good agricultural land available in future years when land is in greater demand for the production of food and fiber. Agricultural land can also be effectively used as separators or buffers between towns and urban concentrations.

The agricultural land that is in the western part of the County and in a location that is not anticipated to be served by public water or sewer for over thirty to forty years has been placed in a proposed two-acre zone. Two-acre zoning will not stop building activity but will reduce the pressures to subdivide agricultural land for building purposes until water and sewers can be economically extended.

JUNIOR AND SENIOR HIGH SCHOOL RECREATION CENTER

In the plan it is anticipated all public schools; elementary, junior and senior high, will be designed to provide recreation facilities for the use by children and adults in nearby residential areas. Each junior and senior high school site should be designed as a park and recreation area to serve a very large residential area. Outdoor recreation areas should be planned as part of the school grounds, be adjacent to the school and be open to all age groups within the community when the regular classes are over for the day. The school buildings should also be designed to enable a section to be opened in the evening for educational and recreational activities for children and adults. Recreational facilities in the junior and senior high schools should be more varied and have a wider range of interest than those proposed for the elementary school. All junior and senior high school sites should be well landscaped and provide, in general, a park-like appearance.

NEIGHBORHOOD PARK AND RECREATION CENTER

A neighborhood, for planning purposes, is considered to be an area served by an elementary school. The elementary school should serve as a combination school and recreation center for children and adults within that neighborhood. The school and its recreation area should be designed to provide space for outdoor and indoor recreational activity. The neighborhood school recreation center should be planned primarily for children from the ages of five to fourteen years. The center should be within walking distance of the majority of the homes in the neighborhood. The school building should also be designed to accommodate meetings without requiring that the entire building be opened or heated while the meetings are in process.

SMALL PARKS AND PLAY LOTS

Small open space areas or play lots should be reserved in developments for the use of the residents. Play lots should be planned primarily for pre-school age children but also provide a sitting area and possibly some recreational activities for adults. The facilities for the children need not be expensive or elaborate, but should be imaginative and provide creative outdoor activity, if possible.

The play lot should be within walking distance of the homes served and readily accessible to mothers and children. It should be supervised by parents or volunteers in the neighborhood. Ownership should be by the developer or turned over to the residents and maintained by them. The small play lots should not be in County ownership.

SPECIAL RECREATIONAL FACILITIES

Other special recreational facilities should be provided within the County. Examples of such facilities are golf courses, swim clubs, bowling alleys, and other recreational activities. Developers should give thought to planning private swim clubs or similar recreational clubs within their subdivisions or shared with other developments. Swim clubs have certainly become very popular and appear to be a very worthwhile facility for neighborhoods.

Along roads and pedestrian walks, in town centers or wherever there is movement of people, strips or borders of greenery, in the form of trees, shrubs, vines, flowers, etc. should be planted. These strips of greenery can do much to improve the physical environment without the expenditure of large sums of money. The proposed green strips and borders can be very effective in visually shielding cars and highways from adjoining properties. Noise can also be reduced somewhat by dense planting. In urban locations the green strips can greatly beautify and improve drab and monotonous building concentrations. The strips along highways should be as wide as possible, but not less than ten to twenty feet. They should be densely planted to give an impression of being very wide.

By following the park and open space plan, Howard County can, to a large extent, preserve its present character and innate beauty and still absorb the large growth expected.

Commercial

Commercial facilities of various types are needed to serve the County. For many years there has been a trend in suburban areas toward the "shopping center," containing a wide variety of stores and goods. The shopping center has usually been under one ownership, planned as one unit with room for expansion and with ample offstreet parking. This center has generally been a definite improvement over the commercial string developments unfortunately seen along busy streets throughout the United States.

In many suburban areas, through lack of guidance, a spotty pattern has developed with shopping and other community facilities scattered about a large area. This causes much unnecessary traveling on the part of the suburban dweller. The shopping center can concentrate many commercial activities in one area, thus greatly reducing the number of stops of a shopper. The shopping center also has a great potential for becoming a "town center," or a small "village," in the best sense of the word.

There are many types of commercial uses which are incompatible to the uses found in a shopping center and must seek other locations. The location of the land to be used for commercial purposes should be carefully selected to insure the facilities will be compatible to adjoining properties and best serve the people in the community. Commercial areas should be distributed in accordance to good planning policies wth adequate and safe access by private and public transportation. The amount of commercial land thought to be needed for the anticipated population has been included in the land use plan after detailed studies and investigations were made.

COMMERCIAL PLANNING POLICY

Four basic types of shopping centers considered for the County were: regional, community, neighborhood, and local (general store). Shopping centers should be designed as a comprehensive unit with fixed limits as to expansion. The centers should be spaced certain distances apart, depending on the population density and the circulation system. Libraries, exhibition space, meeting rooms and restaurants with outdoor eating space should be included in the centers.

REGIONAL SHOPPING CENTER POLICY

A regional shopping center should consist of a large group of stores which provide a wide range and variety of goods and services. It should serve 15,000 to 25,000 families. This center should be located at the intersection of a regional freeway and a primary road, two primary roads or a primary and a secondary road.

The regional center should include one or more department stores, numerous shops handling convenience, demand and impulse goods, as well as restaurants and other retail stores.

The center should be well served by secondary or collector roads so as not to create traffic problems. This center should serve a very large segment of the metropolitan area. It is

James W. Rouse, Inc.

Community Shopping Center

not anticipated that a regional center will be needed in Howard County for over thirty to forty years due to numerous shopping facilities adjacent to the County.

COMMUNITY SHOPPING CENTER POLICY

A community shopping center should be planned to serve approximately 10,000 to 15,000 families or 40,000 to 60,000 people. Floor space area should range from 120,000 to 250,000 square feet and the total area, twelve to twenty-five acres. The community shopping center should contain primarily service and retail stores.

Community shopping centers will provide more comparison shopping than neighborhood centers. They may, or may not, contain a junior department store, but there should be at least one supermarket and one variety store. In addition they should contain a restaurant, post office, bank, library, and some meeting rooms. There should also be space for outdoor exhibitions and band concerts.

The community shopping center should be distributed according to the present and future population to be served. It should be located at the intersection of two primary roads or at the intersection of a primary and a secondary road. Other combinations, of course, are possible.

NEIGHBORHOOD SHOPPING CENTER POLICY

There should be one neighborhood shopping center from three to twelve acres to serve 2,000 to 5,000 families. Floor space should range from 30,000 to 120,000 square feet. The neighborhood shopping centers should be built around a supermarket and drug store. The size of the supermarket would probably determine the over-all size of the neighborhood center. The neighborhood center should provide the day-to-day convenience items needed by families.

The neighborhood center should have frontage on a secondary or primary road, be well served by service roads and be close to the center of the area it serves. The neighborhood center should be within five minutes travel time of the area it is serving.

Neighborhood centers should make provision for the following stores: food, drug, small variety, dry cleaner, beauty shop, barber shop, bakery, bank, delicatessen, shoe store, women's and/or children's apparel and hardware. The larger neighborhood shopping centers and some of the smaller ones should contain a branch library. The large neighborhood shopping center should contain a restaurant and, if possible, outdoor eating facilities.

LOCAL CENTER (B-1) POLICY

There appears to be a need for the local or general store facility in suburban areas. As shopping centers will be spaced a few miles apart due to the lower population density expected and the use of the auto, there is continuing need for the small center where a minor purchase can be made without a long trip to one of the larger shopping centers. The local center should, therefore, be spaced between the large shopping centers and serve from 500 to 2,000 families. It should contain either one large general store or two to three stores handling food and drug products. The floor space should range from 2,000 to 20,000 square feet and the total area from one to two acres. There should be ample off-street parking space. The local center should of necessity be adjacent to a residential area. It should be adequately landscaped to screen the buildings, parking, loading and unloading movements from adjoining properties.

GENERAL COMMERCIAL AREA (B-2) POLICY

A general commercial area should provide for uses such as lumber yards, automobile sales, used car lots, laundries, printing house, etc. Care must be taken to locate these uses in groupings and to prevent ribbon development. Regulations should insure that adequate open space is provided on a lot, buildings are properly related to each other and adequate landscaping and off-street parking provided. Normally unsightly or noisy businesses such as auto wreckers, saw mills, etc. should be required to locate in areas where they will not affect property values adversely, and should be required to screen the operation by trees or fences and control noise and odors. The general commercial areas should be planned and developed in the future in the same manner as industrial parks or shopping centers.

COMMERCIAL OFFICE (C-O) POLICY

A new commercial zone "Commercial Office (C-O)," is thought to be needed adjacent to shopping centers to house businesses and professional services such as insurance, legal, financial,

medical, dental, engineering, commercial schools, real estate and other general offices.

A planned commercial office center should be designed as one comprehensive unit within a separate C-O zoning district. The center should provide sufficient parking area, four square feet of parking area to one square foot of gross floor area, should be well landscaped and accommodate certain complimentary accessory uses.

COMMERCIAL SERVICE AREA (T-1) POLICY

There are certain types of commercial businesses needed that should be located near intersections of highways or in close proximity to a major highway. Types of activities that should be located in "commercial service areas" are motels, restaurants, automobile service stations and perhaps a few other compatible land uses. Where possible, a commercial service area should be planned adjacent to a large industrial or employment center.

RENEWAL OF DETERIORATING COMMERCIAL AREAS

Unfortunately, many of the existing highways in Howard County have ribbon type commercial developments which are very poorly located and haphazardly developed. Such areas should be studied in detail and a plan for renewal developed. The plan should show how these areas, in stages and over a period of years, could become more modern commercial centers. In some cases land presently zoned commercial and vacant, but poorly located, should be rezoned to a more appropriate zone. The detailed renewal plan could include provision for off-street parking, pedestrian malls, park buffers between commercial areas and adjoining properties, removal of nuisance or incompatible stores and uses, planting of trees and shrubbery, repairing and painting buildings, removal of gaudy oversized signs and replacement with small, simple, but colorful and attractive signs.

EXISTING COMMERCIAL LAND USES

Commercial land use activities have been divided into two categories: retail and service. Retail activities include consumer goods, such as, food stores, drug stores, restaurants and general variety stores. Service activities include barber shops, beauty shops, radio and television repair shops, shoe repair shops, motels, hotels, tourist homes, dry cleaners, amusement centers and many financial, business and professional offices. The total area of each commercial land use is the sum of the building coverage, the off-street parking area and the service or yard area.

LAND ZONED FOR COMMERCIAL USE

As of January 1960, there were 522 acres of land used for commercial purposes, of which 304 acres were considered retail and service. Approximately five acres were occupied by vacant commercial buildings. The remaining 213 acres are of a special nature and include three raceways, an amusement park, a fair ground and a livestock auction. Of the 522 acres, 142 acres are in commercial zones (B-1, B-2, S-C, T-1), seventy-eight acres are non-conforming and 302 acres are in industrial zones which permit commercial uses. The 304 acres of retail and service commercial land cover approximately 1.7% of the total "developed land" (18,267 acres) in the County. See Table XI, "Existing and Proposed Commercial Land Use and Zoning."

TABLE XI

EXISTING AND PROPOSED COMMERCIAL LAND USE AND ZONING
(In Acres)

Commercial Zones	Land Zoned for Commercial (March 1, 1960)	Land Used for Commercial (Jan. 1, 1960)	Land Zoned Commercial, But Occupied by Other Land Uses	Land Zoned for Commercial But Vacant	Proposed Zoning Changes		Land Proposed In General Plan to be Zoned for Commercial
					Additions	Deletions	
B–1	42	12	17	13	32	15	59
B–2	486	121	49	316	57	151	392
S–C	38	—	—	38	142	—	180
C–O	—	—	—	—	32	—	32
T–1	31	9	—	22	178	—	209
Total Land in Commercial Zones	597	142	66	389	441	166	872
Commercial Land In other Zones M–1, M–2 & T–2		302				129	173
Residential		78				—	78
Total Commercial Land		522					1123

Up to January 1, 1960, there were 346 retail establishments or uses covering 159 acres or an average of .46 acres per land use. Four types of uses accounted for over 80 percent of the total retail land area and they were: food, 14.5 acres; eating and drinking, 44.1 acres; automobile dealers (new and used), 27.7 acres; and automobile service stations, 39.7 acres. Commercial service establishments or uses numbered 211 and occupied 145 acres or an average of .69 acres per land use. Motels and tourist homes occupied 81.9 acres, or approximately 56% of the total service land uses. In addition to the total 557 commercial land uses in the County, there were twenty-three vacant commercial structures on approximately five acres of land.

Commercial land uses are distributed in Howard County mainly in the form of strips of development on either or both sides of a major highway. The highways most heavily developed in commercial strips are U.S. Route 1, U.S. Route 40 east of Pine Orchard, and Maryland Route 144 east of Rogers Avenue and in the western part of the County. There are few areas heavily concentrated with commercial uses, except in Ellicott City and Elkridge.

As of March 1, 1960, there were 597 acres of land zoned in four commercial district zones, S-C, B-1, B-2 and T-1. At that time there were three shopping center districts of which one was in litigation. Not including the one in litigation, the other two S-C districts totaled thirty-eight acres. Two of the S-C districts are within a mile and one-half of each other on Route

U.S. 29 at Gorman Road and at Route 32, much too close for shopping districts of their land areas. Both districts have been in the process of developing for approximately four years, but an automobile service station at U.S. 29 and Route 32 and a small vacant structure at U.S. 29 and Gorman Road are the only commercial activities to have developed at either location. A large area is actually under development as a shopping center at Route 40 and Rogers Avenue, but is zoned B-2.

There were approximately forty-two acres zoned B-1, the more restrictive of the two business districts. This district occurs primarily along both sides of Maryland Route 144 for a depth of 100 feet, with some exceptions, from the Patapsco River to Rogers Avenue. B-1 districts also are found on all four corners of road intersections in many areas of the County.

There were 486 acres zoned B-2, the least restrictive commercial district. The district occurs predominately on both sides of U.S. 40 in scattered locations for a distance of approximately four miles in the northeastern section of the County. B-2 districts are found also at many road intersections, predominately along Md. 144, U.S. 29 and U.S. 40.

There are three zoning districts, M-1 (light manufacturing), M-2 (heavy manufacturing), and T-2 (tourist accommodations), where certain commercial uses are permitted. The existing M-1 and M-2 districts permit all commercial uses allowed in the B-2 district which amount to 913 and 4,768 acres, respectively. There were fifty-six acres zoned T-2, which is primarily for trailer coach parks and any use normally associated with them. Special permits allowing certain commercial uses had been granted for approximately eighteen acres in the County.

Of the total land area zoned for commercial activities, 597 acres, only 142 acres were actually used for commercial purposes. As can be seen, 65% of the zoned land area within the four "commercial" districts has yet to be developed, allowing possibly, for large population increases before additional commercial zoning is needed.

The zoning districts, M-1, M-2, T-2 and special permits, S-P, which permit all or specific types of commercial uses contained 149 acres of land used by commercial activities. Within the M-1 and M-2 districts 153 acres were used for an automobile speedway, a harness raceway and a race track. There were seventy-eight acres of land in commercial uses that are non-conforming or in districts where commercial activities are not permitted to operate unless having existed before zoning regulations were established.

STRIP ZONING

Much of the County's existing zoning for commercial uses is in what is commonly called "strip" or "ribbon" zoning, where commercial development clutters the frontage along major highways for great distances. The results of "strip" development are:

The loss of views and vistas of the countryside to the automobile traveler

The reduction in carrying capacity of the highways by

continual interference of through traffic with cars moving in and out from any point along the ribbon of commercial establishments

The blighting influence on adjoining residential areas because of the excessive traffic and noise

The possible damage to businesses themselves, who can not compete with well-planned commercial and shopping centers in providing customers with a variety of goods and services within walking distance of each other.

FOUR CORNER ZONING

This type of zoning may not create problems in areas of low population densities or in places where the traffic volume is very low. This pattern of commercial zoning does present serious problems when the traffic volumes on the two intersecting roads increase. Howard County has many "four-corner" commercial zoning districts that have not caused serious problems, but may in the future if not guided in their development.

COMMERCIAL LAND USE PROJECTION METHODS

Before a commercial land use plan can be made, certain assumptions and projections must be made.

Given a specific population estimate, it is possible to determine with some accuracy:

The future gross floor area of retail and service facilities;

The anticipated population's purchasing power for retail sales;

The number, type and size of planned shopping centers;

The amount of parking area required; and

The total amount of commercial land needed to provide space for necessary commercial facilities.

There are many methods for estimating the future commercial land area required for a jurisdiction. Several methods were used to determine Howard County's future needs, based on a projected population size and an estimated number of families. Studies were made of the existing land use pattern in Howard County. Commercial studies and findings in other jurisdictions were also reviewed and analyzed. After these methods were evaluated, the commercial land use plan was prepared.

Gross Floor Area Method

The gross floor area method of projecting commercial needs for the future was accomplished through comparison of commercial development in similar nearby communities. Gross floor area per person in major types of business uses was determined by an analysis of data from eight commercial trade areas in the Maryland Suburban Area of Washington, D.C., and evaluated in relation to the existing stage of development in each type of commercial use in Howard County. The resulting total of 20.7 square feet per person for commercial retail sales and services was derived. An additional 5.6 square feet

per person for professional and business services brought the total to 26.3 square feet per person for total commercial gross floor area. The total gross floor area per person was applied to the projected 1985 population of 150,000 (140,000-160,000) and year 2000 population of 240,000 (220,000-260,000), producing a demand for an estimated 3,945,000 and 6,312,000 square feet, respectively. The ratio of parking area to gross floor area has been assumed at four to one, since a very high percentage of shoppers in suburban areas shop by automobiles. In addition, 10% of the total area of gross floor area and parking area was added for truck drives, loading areas and landscaping. The estimated total commercial land areas needed for 1985 and 2000 by this method are 498 and 797 acres, respectively. This method is based on commercial land area being efficiently used and is not typical of many existing situations.

Retail Purchasing Power Method

To estimate the total retail purchasing power for Howard County's population in 1985 and 2000, the total number of families based on 150,000 and 240,000 populations was determined to be approximately 40,000 and 64,000, respectively. In Howard County the median household *real* income is estimated to be $9,000 by 1985, and $10,400 by the year 2000. The median household real income for 1985 and 2000 was estimated by use of income projections from a Housing Study made by the Baltimore Regional Planning Council for the Baltimore Region in 1960. The median income of the Baltimore region households is estimated to rise from $6,430 today to $9,060 in 1970, $11,450 in 1980. Real income for households in the Baltimore Region are anticipated to rise from $6,430 in 1960, to $8,320 in 1980. This is based on Department of Commerce forecasts. Real incomes for 1985 and 2000 for Howard County were projected by the use of a 1½% increase per year from 1980 to 1985 and by a 1% increase per year from 1985 to 2000. It is, of course, difficult to make real income forecasts much over twenty years. The 1960 total household real income for Howard County is approximately $66,229,000 and is estimated to be about $360,000,000 in 1985 and about $665,600,000 in the year 2000.

The percentage of family income spent for total commercial retail sales and services is estimated at 65.6%, the percentage used by Homer Hoyt Associates in their study, *Economic Survey of Montgomery and Prince George's Counties, Maryland,* in 1955. Application of this percentage to the total household income produces an estimated total retail purchasing power for Howard County of $43,446,000 for 1960, $236,000,000 for 1985 and $436,600,000 for the year 2000. Hoyt's percentage of income spent for each type of commercial use was then applied to the total retail purchasing power giving the amount of retail purchases each type of commercial land use can expect in 1985 and 2000. Each type of commercial land use derives an average income or sales per square foot of floor area each year. The use of sales per square foot against total expected retail purchases provides the amount of gross floor area needed

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by each type of commercial use, a total for all uses of 5,000,000 square feet and 9,290,000, respectively. Applying the parking area ratio of four to one to gross floor area and the 10% of both parking area and floor area for landscaping and service drives, the total commercial land area needed for 1985 and 2000 by this method, is 632 acres and 1,172 acres, respectively.

Shopping Center Projection Method

Estimating the number of families for 1985 and 2000 to be approximately 40,000 and 64,000 in Howard County, the number and types of shopping centers can be determined by the number of families needed to support each type. The basic types of shopping centers considered in this method of projection are: community and neighborhood. The following Table XII, presents the number of families, the floor area, the size of each type of center, the number of centers needed, the total floor area of each type of center and the total land area of the shopping centers.

COMMERCIAL LAND USE PLAN FOR THE YEARS 1985 AND 2000

In proposing future development of commercial land uses and the total amount of land required by the year 1985 and 2000, evaluation of the results of the projections and the existing commercial land use was necessary. The evaluation was a matter of judgment based on present knowledge of existing commercial land uses and the ranges created by the results of the different projections.

A total of 1,123 acres is proposed for commercial land uses in the plan for the next thirty to forty years. Of this total, 872 acres (retail and service) are proposed to be located in commercial zones. The remaining 251 acres (special) are existing commercial uses located in zones other than commercial. The 872 acres proposed are in five zones; S-C (Shopping Center) 180 acres; B-1 (Local Center) 59 acres; B-2 (General Commercial) 392 acres; C-O (Commercial Office) 32 acres; and T-1 (Commercial Service—Motel) 209 acres.

The 1,123 acres of commercial land would serve an estimated population of 220,000 to 260,000 by the year 2000. The Mary-

TABLE XII SHOPPING CENTER PROJECTIONS

Type of Center	No. of Families Served	Amount of Floor Area (Sq. ft.)	Size of Center (Acres)	No. of Centers*		Total Floor Area (Sq. ft.)		Total Land Area (Acres)	
				1985	2000	1985	2000	1985	2000
Community	10,000 to 15,000	120,000 to 250,000	12 to 25	3	5	757,000	925,000	66	106
Neighborhood	2,000 to 10,000	30,000 to 120,000	3 to 12	7	11	525,000	825,000	60	95
Total				10	16	1,100,000	1,750,000	126	201

*The median of each range was used in projecting number of centers, total floor area and total land area. Estimated number of families in Howard County: 1985 = 40,000 and 2000 = 64,000.

land Suburban Area of Washington, D.C., in 1955, used only 920 acres of commercial land area (retail, service and special) to serve its population of 454,000. It is felt sufficient commercial land is proposed to serve the anticipated population of Howard County for the next thirty to forty years.

Thirteen shopping centers are proposed which will require approximately 180 acres of land by the year 2000. Retail establishments within the shopping centers will need approximately 129 acres and service establishments, fifty-one acres.

No regional shopping centers are proposed because of the close proximity of two large shopping centers to Howard County: one, a regional center at Westview, three miles east of the County on U.S. Route 40; and another, a large community center south of the town of Laurel, less than one mile south of the County on U.S. Route 1. Other regional shopping centers are in nearby Baltimore and Washington, D.C.

Four community shopping centers are proposed for the year 2000 using approximately eighty-eight acres. The four centers are proposed to be located at: Rogers Avenue and U.S. Route 40, containing approximately twenty-four acres; Gorman Road and U.S. Route 29, twenty-four acres; Lark Brown Road and Maryland Route 175, twenty acres; and Clarksville, twenty acres.

Nine neighborhood shopping centers are proposed of which eight of the nine centers will contain a total of ninety-two acres. Ellicott City is considered a neighborhood center, although it is recommended it retain its B-1 zoning classification. The eight neighborhood centers will vary in size between nine and twelve acres, averaging 11.5 acres per center. The eight neighborhood centers were distributed throughout the County to best serve the expected population for the year 2000.

A total of fifty-nine acres are in the local center classification (B-1 zone). Each local center should not be larger than two acres.

Commercial service areas (T-1) are proposed to serve major traffic routes and large employment centers and should be located near the intersections of highways or in close proximity to a major highway. Service areas are planned along U.S. Route 1, U.S. Route 40, Maryland Route 32 and other important major roads. Motels, restaurants and automobile service centers are the types of land uses recommended to be permitted in the commercial service areas. The Plan contains a total of 209 acres in the T-1 zoning district.

Three hundred and ninety-two acres are allocated in the Plan for General Commercial areas (B-2). This zone provides space for uses such as lumber yards, automobile sales and used car lots, restaurants, movie theaters and laundries. Existing situations, such as, along stretches of U.S. 1 and U.S. 40, emphasize the fact that care must be taken to locate these uses in groupings and to prevent further ribbon development. Regulations should insure that adequate open space is provided on a lot, buildings are properly related to each other, and that adequate landscaping and off-street parking be provided. The

General Commercial areas should be planned and developed in the future in the same manner as industrial parks or shopping centers.

There are six planned commercial office (C-O) centers with a total of thirty-two acres or approximately five acres each. These office centers are located at Clarksville, U.S. 29 and Gorman Road, U.S. 29 and Route 108, Savage, Route 175 and Lark Brown Road and Elkridge.

ADDITIONAL COMMERCIAL ZONING NEEDED BY THE YEAR 2000

As of March 1, 1960, 597 acres were zoned for commercial activities (B-1, B-2, S-C and T-1 zones) in the County. As indicated in the Plan, additional land will be needed for commercial use to serve the anticipated population in the next thirty to forty years. Approximately 441 acres of land will need to be rezoned for commercial use (B-1, B-2, S-C, C-O and T-1) to provide the amount of land needed, 1,123 acres, by the year 2000. In making the commercial study it was found that some land zoned for commercial use, (but vacant or occupied by another use), was poorly located and was excluded in the proposed plan for future commercial activities. Approximately 166 acres of land now zoned commercial is proposed to be rezoned to districts other than commercial. Fifteen acres in the B-1 zone and 151 acres in the B-2 zone are proposed to be changed. These proposed changes amount to a net of 275 acres of land that should be changed to a commercial classification.

A total of fifty-nine acres of land are proposed in the Plan for Local Centers or the B-1 classification. Of the 41.8 acres zoned B-1, it is recommended fifteen acres be removed from the original B-1 classification as the land is occupied by non-commercial uses that cannot readily be removed. An additional thirty-two acres will need to be rezoned at a later time to achieve the suggested acreage in the Plan.

Of the 486 acres zoned B-2, 121 acres are being used for commercial purposes. As a total of 392 acres of B-2 classified land is proposed in the General Plan, it is recommended a net of ninety-two acres be changed from B-2 to another classification.

There was a total of thirty-eight acres zoned in the Shopping Center district as of March 1, 1960. As 180 acres are proposed in the General Plan for shopping centers, an additional 142 acres will need to be rezoned at a later time.

The Commercial Office (C-O) district, a proposed new zoning classification, is planned to be applied to six sites in the County totaling thirty-two acres in all.

There were thirty-one acres zoned T-1. As the Plan proposes 209 acres for the Commercial Service category (T-1 District), an additional 178 acres will need to be rezoned to the T-1 category.

In addition to the proposed 872 acres of land classified for commercial use in the General Plan, there are approximately 251 acres of land that were being used by commercial activities in land use classifications other than commercial and will probably continue to be used for commercial for many years. Both categories provide a total of 1,123 acres of commercial land area in the General Plan for the year 2000.

Industry

INDUSTRIAL PLANNING OBJECTIVES

At the time the Planning Commission initiated its program for preparing the Comprehensive General Plan of the County, it adopted basic Planning Objectives. There were two objectives that were concerned with industry and the economic future of the County. They are as follows:

> Provisions, through planning, should be made for private, economic activity in order to provide a variety of employment opportunities for people in the County.
>
> The General Plan should include proposals for the reservation of land for industrial and large employment centers (major concentrations of jobs in industry, government and research).

In view of the above planning objectives the Planning Commission was of the opinion that there was a definite need for industry in the County, but it was important to make adequate studies before preparing a plan that would guide the growth of industry. The primary purposes for making the industrial study were as follows:

> To determine the present industrial trends in the County.
>
> To determine the potential for industrial growth in the County.
>
> To determine the type of industry that would be economically desirable from the County's viewpoint. The County wants industrial firms that will be able to more than pay their own way, yet not create additional problems and costs that would cancel out the tax revenue received from the firms.
>
> To determine the amount of industry necessary to aid in the support of public facilities and services needed for the anticipated population for the next twenty to twenty-five years.
>
> To evaluate the vacant land zoned for industry and determine how much of the vacant land should continue in its present zoning.
>
> To establish an industrial planning policy.
>
> To prepare a proposed industrial land use plan that will provide the additional land needed for industrial purposes for the next thirty to forty years.

DEFINITION OF INDUSTRY

The definition of industry includes the following types of activities:

> Manufacturing, wholesale trade, transportation, communication, public utilities and construction. (Sand and gravel operations have not been defined as industry, but are considered in a special category as an extractive operation.)

INDUSTRIAL ASSUMPTIONS

It was necessary to make certain assumptions concerning the future industrial growth in the County as a basis for preparing the industrial land use plan of which the three basic assumptions are described below.

Howard County, due to its strategic geographic position between two expanding Metropolitan areas (Baltimore-Washington), will be sought after for site locations, by industrial, large commercial, and research type firms. Howard County takes on a new importance from an industrial viewpoint if it is realized that the County will be in the center of two Metropolitan areas totaling approximately six million population by 1980. From the information available the Planning Commission and their industrial planning consultant accepted the view that Howard County will have a large industrial growth.

Howard County has an important location advantage between major eastern metropolitan markets. This will make it possible for production and distribution facilities, trucking terminals and wholesaling facilities to develop in the County.

Industry can be an asset to the County if site locations are properly planned. If sites are poorly located the demand for new roads, schools, utilities, police protection and other facilities to serve the sites will require more funds than the tax revenue from the industrial sites would provide.

THE NEED FOR INDUSTRY

Industry is needed for the following reasons:

Industry can provide employment to people in the County. A variety of employment opportunities available within the County provides a greater choice of jobs and makes it possible for a person to change jobs without changing his place of residence.

Industry can provide tax revenue to help pay for new community facilities and services (roads, schools, recreation, libraries, water mains, sewers, garbage collection, etc.) that will be needed for the growing population within the County. Without tax revenue from industry, taxes from residential and commercial properties probably will not be sufficient to pay for the quality of facilities and services needed or demanded. The County will have the alternative of eliminating or reducing the quality of facilities and services, or making a very large increase in the real estate tax rate.

Industry can be a good customer for local firms. Local firms will have a greater opportunity to trade and increase their businesses with the expansion of new industry. Industry is more than a creator of jobs and businesses for people, it is also the reason why a community exists. It becomes the core around which an area grows and develops.

Howard County now has a great opportunity to diversify its economic base and take advantage of its strategic position. Future industrial growth can take place in a planned and orderly manner, or development can occur in a haphazard and slipshod fashion leaving serious problems to be borne by the present and future generations.

WHAT TYPE INDUSTRY CAN BE ATTRACTED TO THE COUNTY?

Due to Howard County's strategic position, topography, transportation network and present utilities and services, there is a certain range or type of industrial firms that will probably locate here. Some types of industrial firms could not economically justify locating in the County. It was considered important, however, to estimate the type of industries that could come to the County. Interviews were held with the industrial divisions of the Gas and Electric Company, the Baltimore and Ohio Railroad and with industrial realtors. As a result of the interviews, a list was prepared showing which industries would probably be attracted to the County.

There has been some development of research laboratories in the County which is an important asset. Many counties near the Metropolitan Center of Baltimore and Washington, D.C., want very much to attract research type plants to their areas. Thus the competition is very strong for this type of plant. Howard County should not confine its planning or its industrial recruiting to so limited a base. It is anticipated that the County can attract the following types of industry, which could be an economic asset:

—Food and kindred products
—Lumber and wood products
—Furniture and fixtures
—Paper and allied products
—Printing and publishing
—Plastic fabrication
—Stone, clay and glass
—Fabricated metals
—Machinery jobs
—Electrical equipment and supplies including electronics
—Professional and Scientific instruments
—Truck terminals
—Food distribution warehouses
—Drug distribution
—Paint products
—Wood windows and door screens, shades, venetian blinds
—Warehousing for the building industry
—Rubber goods, gloves, etc.
—Fiber cans, drums, tubes

Two existing economic assets of the County are Johns Hopkins Laboratory and W. R. Grace Laboratory. Such facilities should act as generators for other firms. Small industrial plants and laboratories which subcontract to them may grow into substantial size engineering and production facilities on their own. This has been the case in Johns Hopkins Applied Physics Laboratory in Silver Spring. It was an out-growth of the proximity fuse program first developed in the National Bureau of Standards.

INDUSTRIAL PLANNING POLICY

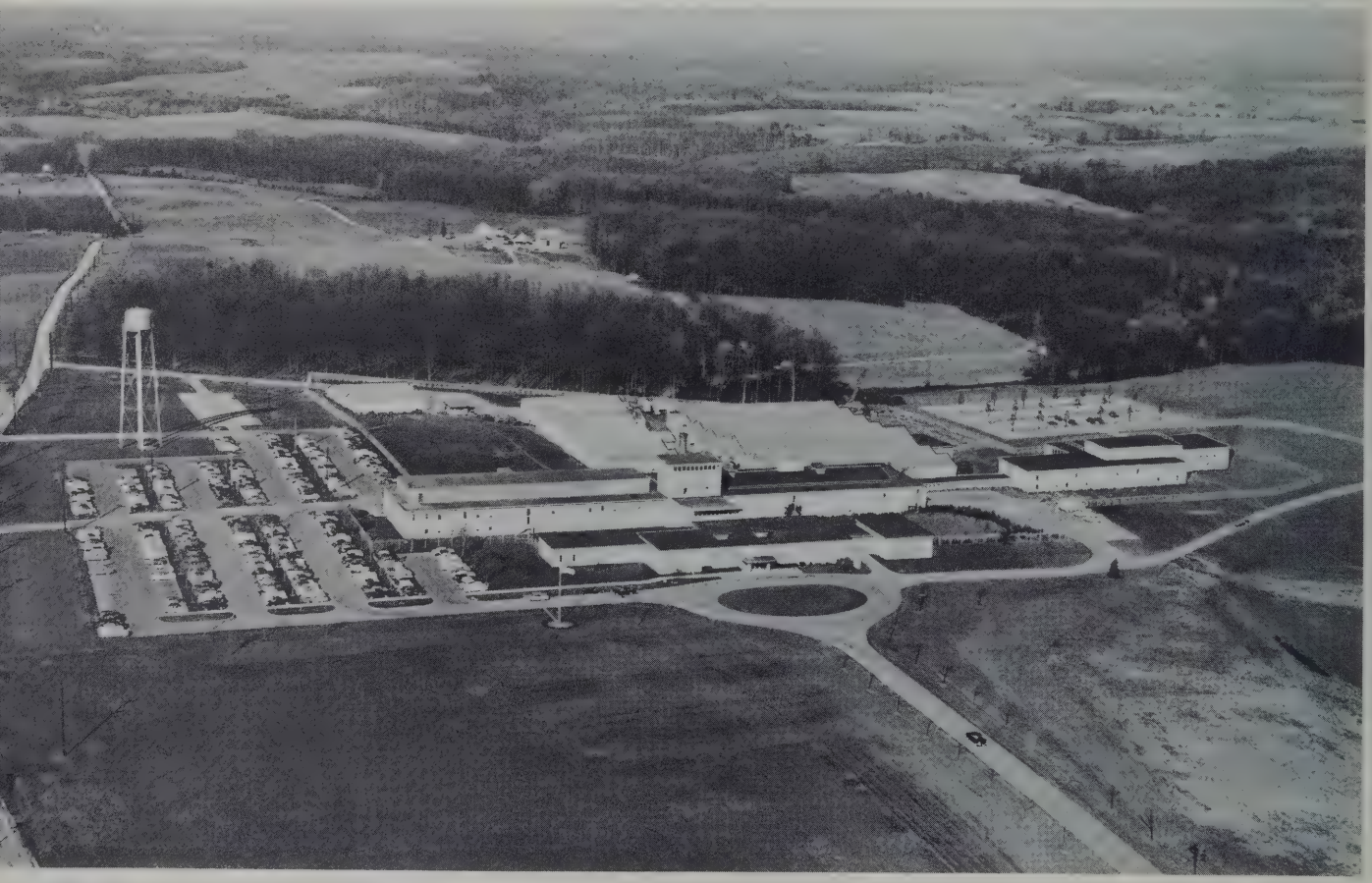
The Planning Commission adopted an industrial planning policy to use as a guide in developing the industrial land use plan. The industrial policy is meant to serve as a guide and not necessarily as a fixed rule to follow.

The planning for industry should be long range, thirty to forty years, and considered on a regional as well as on a local basis. Industry has many preferences and seeks locations in urban, suburban or rural areas. Howard County should plan realistically for the number and type of industries that could or would want to locate within its jurisdiction.

Industry should be located near freeways, major highways or have access to a major highway. Space for industry should be provided near railroads, but a major highway should still serve the area. In most cases industry should be located independent of residential and commercial concentrations. Industrial parks should be planned and developed as a subdivision, the plants sited in an orderly manner within the area and related properly to the circulation network and other plants. Industries should attempt to make their development attractive by utilizing architects with imagination and talent in designing the buildings. Industrial buildings can and should be functional as well as attractive to view. It is as important for people to work in pleasant surroundings as it is for them to reside in attractive residential areas. Trees and landscaping should be utilized throughout an industrial park or large industrial center, and as a screen to nearby commercial or residential developments.

Industrial performance and space standards, to control nuisances caused by pollution, noise, smoke, odor, as well as off-street parking, coverage of site, etc., should be established and well enforced. These standards can do much to make industry

Johns Hopkins Applied Physics Laboratory



a good neighbor. With performance standards and regulations and well-planned locations for industry, a community can more safely invite industry knowing it must abide by the ground rules. Industrial parks should have a low building coverage, not over twenty percent, large landscaped areas, ample parking, recreation and eating facilities.

Industrial parks (50 to 400 acres under one ownership or management having space and architectural control) should be located not less than two to four miles apart, except along Route 1 and in certain special cases. By following the above industrial and employment center location policy it can be possible to:

Keep truck and heavy traffic out of residential, public and commercial areas.

Make it possible for people to live near their employment area if they so desire.

Prevent too great a concentration of industry in one location which would result in traffic congestion and high volumes of traffic in the vicinity.

Make greater use of existing highway network by distributing the flow of traffic (carrying goods and people) more evenly throughout the network.

Provide industrial sites with ample open space which in turn will give employees an attractive environment in which to work.

Make industrial areas accessible to employees over a wide area.

INVENTORY OF INDUSTRIAL LAND USE

To make estimates of future industrial growth and to prepare a plan, it was necessary to survey existing industry in the County and to analyze the growth pattern. A detailed industrial survey and study was completed in 1959 which covered all known industrial firms in the County. This study, entitled "Industrial Report," was published in May 1959 and contains in detail the findings of the study.

ANALYSIS OF INDUSTRIAL LOCATIONS AND LAND ZONED FOR INDUSTRY

As of July, 1960, there were 913 acres zoned M-1, 4,768 acres zoned M-2, and 389 acres zoned M-R, making a total of 6,070 acres. The plants and other uses operating from a special permit total 422 acres. Thus the total land zoned for industrial use, M-1, M-2, M-R and special permit, total 6,492 acres. The total acreage utilized, or under development by industry in the County totals 770 acres. See Table XIII, "Land Used and Zoned For Industry."

TABLE XIII

LAND USED AND ZONED FOR INDUSTRY
(JULY 1960)

1.	Total land utilized by industry or under development (not including extractive operations)	770 acres
2.	Total amount of land zoned for industry (including industrial use operating under special permit)	6,492 acres

3. Industrial areas operating under special permit ---------- 422 acres
4. Industrial areas that are non-conforming---- 40 acres
5. Land zoned for industry that is vacant or occupied by a land use type other than industrial. (Total land zoned industrial minus land utilized by industry) ----------5,722 acres
6. Land zoned for industry but not presently available or usable (not including land utilized by industry) ----------2,466 acres
7. Land zoned for industry that is vacant and presently available and usable ----------3,256 acres

A large amount of land is zoned for industry that is not presently usable or available for a variety of reasons. Some of this land should be rezoned to a more suitable classification as soon as possible. Along Route 1 area there are areas zoned for industry that are owned by public institutions, such as the Patuxent Institute, the State Police Barracks and the University of Maryland. Other areas along Route 1 are too narrow to be usable and in many cases the topography is too steep or marshy to be feasible for development. The narrow strip zoned M-1 along Route 1 is considered by professional planners to be very poor zoning. Much of this strip zone should be removed, except where the adjoining land is proposed for industry.

INDUSTRIAL PLAN

The Baltimore Regional Planning Council's study of industrial land use needs by 1980 indicates that not less than 60,000 acres will be needed by industry in the Baltimore Region. To acquire the 60,000 acres for industry it is estimated 29,400 new acres of prime industrial land must be found and zoned in the Baltimore Region, if it is to provide for the growth of its existing industries and be ready for the new industrial firms which will enter the Baltimore Region. The General Plan for Howard County allocates 6,423 acres for industrial purposes.

As of July, 1960, there were 6,492 acres zoned for industry (including special permits). In the process of making the industrial study and preparing the plan, it was found that 2,466 acres of land, zoned for industry, were not presently usable or available for industrial purposes. The 2,466 acres were proposed for another land use category. As it was felt that approximately 6,500 acres of good usable land was needed for industry in the next thirty to forty years, an additional 2,397 acres were included in the industrial plan making a total of 6,423 acres.

The amount and location of the proposed industrial sites in the General Plan are in conformity with the industrial planning policy adopted by the Planning Commission.

Due to the topography of Howard County and the framework of its general highway plan, not more than an additional 1,000 acres of land could be added to the proposed industrial land use plan without creating serious problems. The proposed

6,423 acres in the industrial land use plan should certainly provide adequate industrial land for the County for thirty to forty years. This amount of land as now planned should also provide the benefits as outlined under the planning objectives for the County.

Of the total 6,423 acres planned for industrial land uses, 247 acres are in the M-1 (light industrial) zone, 2,968 acres are in the M-2 (heavy industrial) zone, 2,786 acres are in the M-R (manufacturing restricted) zone and 422 acres are permitted under an S-P (special permit) classification. Most of the 3,215 acres in the M-1 and M-2 zones are located between Route #1 and the Baltimore and Ohio Railroad tracks and Deep Run, south of Elkridge to the Howard County line. There are no new M-1 or M-2 industrial zones proposed outside of the above area except those that presently exist.

There are fourteen M-R (manufacturing restricted) industrial sites planned (total of 2,786 acres), of which two are presently zoned. The sites are located adjoining the intersections of existing or proposed freeways or major roads. Six M-R sites are distributed along proposed Interstate 95 (New Route 1), three of which are near the intersection of the Dorsey-Glenelg freeway. One M-R site is planned between the property owned by the Johns Hopkins Applied Physics Laboratory and Route 29, north of Johns Hopkins Road. Three M-R sites adjoin the Savage-Cooksville freeway from Clarksville to Linden Church Road. There are four M-R sites facing the proposed Interstate 70-N; one site at the northwest corner of the intersection with Md. 32; two sites on the southeast and southwest corners of the intersection with Md. 97; and one site on the southwest corner of the intersection with Md. 94.

Most of the 422 acres under the S-P (special permit) classification are utilized in two locations by the Johns Hopkins Applied Physics Laboratory, and the W. R. Grace Research Center.

The M-2 zone is oriented to the railroad because many heavy industrial firms use rail transportation for a considerable amount of hauling of heavy and/or bulky products. Light industrial firms and research laboratories rely mainly on trucks for hauling of merchandise and should be located adjacent to freeways which allow for fast uninterrupted traffic movement.

STAGING OF INDUSTRIAL ZONING

The land proposed for industrial use should be zoned by stages to insure a gradual and orderly growth pattern. Sufficient industrial sites, within the General Plan, should be zoned approximately ten years in advance of need. If this were not done, industrial land prices could be placed so high that industry would not be able to develop.

RECOMMENDATIONS

A large amount of land presently zoned for industry and recommended to remain in the industrial land reserve (South of Route #1) cannot be developed until access roads are constructed. The General Highway Plan has taken these areas into consideration and proposed secondary and collector roads to serve them. These routes have been designed to prevent truck traffic from going through residential areas. There are many fine potential industrial sites that can be served by the

railroad, yet do not have any access roads, or the existing roads are too small and generally inadequate.

A start should be made to improve the County roads adjacent to industrial areas in the next few years. The County should assist in developing these sites to the extent the County Commissioners feel is feasible and in the public interest.

A deteriorating Area

It is recommended that a program be initiated soon to rehabilitate certain locations along U.S. Route 1. The deteriorating sections, residential, commercial and industrial, along Route 1 are acting as a deterrent to new industrial firms in the very sections of the County thought to be best suited for industry. Industry today tends to seek prestige type sites. It would be wise for the County to consider initiating soon an active "renewal" program for U.S. Route 1. This program could consist of some rezoning, sign removal, repair and painting of salvable buildings and clearance of deteriorated structures. The "One Spot" area on the north side of of U.S. Route 1 should be one of the first areas to be "renewed" as an industrial park.

The County, especially in the vicinity of Route 1 has many sand and gravel workings that are unsightly and are future problems if their reuse is not handled properly. In many cases the sand and gravel workings south of Route 1 can be utilized as industrial park areas.

Non-conforming Industrial Uses

Most of the existing industrial uses in the County that are now classified as non-conforming uses, should be continued in that capacity and not permitted to expand except in the few cases where they are located in an area recommended as an industrial area.

Program to Develop a High Standard of Industrial Growth

The Planning Commission should work closely with the County Commissioners, Director of Industrial Relations, owners of land planned for industry, industrial realtors and industrial firms, in implementing the industrial plan and in coordinating industrial development within the County.

The Planning Commission will continue to keep adequate information on existing industrial plants and proposed industrial sites in developing the industrial growth of the County.

Assessment and Taxation Policy

The assessment and taxation policy is a very vital factor in reserving land for industry. The Planning Commission feels vacant land planned and zoned for industrial use should be assessed on the basis of the existing land use until the land is actually under development as an industrial park or site. Too high an assessment on vacant land may force an owner to develop his land prematurely for some other use, thus preventing the site from being utilized for any future industrial development.

It is recommended that the present assessment and taxation policy on industrial land be given careful review to insure that the implementation of the industrial plan will not be hampered by an obsolete assessment and taxation policy.

Community Facilities and Services

Community facilities and services, public and private, are needed to fulfill various social, physical, and cultural needs of people. Space should be provided within communities for churches, schools, libraries, clubs, golf courses, and recreation facilities. Health, welfare, protective, and various commercial services should be available to residents. Utilities are also needed such as water, electricity, gas, telephone, storm drainage and sewage disposal. The private and public agencies should coordinate their activities in planning for the above facilities and services and in constructing or providing them at the proper time.

Short-sightedness in planning community facilities can prove to be very costly and damaging. If future right-of-way lines for water lines, sewerage and storm drainage are not reserved before development takes place, space for the lines will probably have to be condemned and purchased at high prices at a later time. Utility right-of-way lines in stream valleys usually can be obtained by the owner's dedication at the time adjoining land is proposed to be developed.

WATER AND SEWER

As provided by law, public water, sewer and storm drainage facilities come under the jurisdiction of the Howard County Metropolitan Commission.

As of September 1960, the Metropolitan Commission had four Sanitary Sub-Districts in Howard County known as the Ellicott City, Elkridge, Dorsey and Patuxent Sub-Districts with their names indicative of their general location. The Patuxent Sub-District takes in that portion of Howard County adjacent to Laurel in Prince Georges County and extends northeasterly in the vicinity of the Baltimore-Washington Boulevard to Route 32.

Water transmission and distribution mains have been constructed in the various Sub-Districts as follows:

Ellicott City Sub-District	180,000 linear feet
Elkridge Sub-District	82,500 linear feet
Patuxent Sub-District	97,100 linear feet
	359,600 linear feet

As of September 1960, the Dorsey Sub-District was without public water supply, but the necessary engineering work had been undertaken and water mains should be constructed in the Baltimore-Washington Boulevard portion of this sub-district during 1961.

The water distribution systems in the various sub-districts have been designed with a view to meeting the requirements of future growth.

Public sewerage systems of limited capacity now exist in the Ellicott City and Patuxent Sub-Districts. The community of Savage in the Patuxent Sub-Districts has had a public sewer system for many years. Due to the proximity of Fort Meade

and the government agencies located downstream in that area, the capacity of the Savage Sewerage Treatment Plant cannot be increased to discharge additional effluent into the Little Patuxent River. A temporary sewerage treatment plant has been constructed on the Patuxent River to serve the needs of a new residential development. This plant will be abandoned in the near future when the interceptor sewer is constructed in the Patuxent Drainage Area as a joint venture of the Washington Suburban Sanitary Commission and the Howard County Metropolitan Commission.

Another temporary sewerage treatment plant was recently completed in the Ellicott City Sub-District to serve the needs of a specific development. This plant will also be abandoned upon the extension of interceptor sewers into the drainage area served by this temporary treatment plant.

The sections of the County planned to be further developed for public water and sewer facilities are shown on the map entitled "Residential Zoning and Development Stage Plan." This map shows the manner in which the County should be developed for water and sewers by stages of which there are six. Ellicott City, Elkridge, Savage and Laurel are in the first development stage. The area of the County not planned to be sewered during the period covered by the General Plan is also indicated on the map. For a more detailed analysis of the sewer system plan see the "Howard County Sewerage Report," Metropolitan Commission, June 23, 1958. The recommendations and objectives of this report are now in the process of being carried out with detailed engineering work underway in the four Sanitary Sub-Districts. It is anticipated that during 1961, public sewerage facilities will be constructed in parts of the Ellicott City, Elkridge, Dorsey and Patuxent Sub-Districts. It is estimated that it will be thirty to forty years before the sixth stage area would be under any intense development for sewers. The expansion of water and sewer facilities will of course depend on the rate of population growth, assessable base, etc.

The extension and provision of services and facilities, such as water and sewers are very important in influencing the location, pattern, and density of residential, commercial, and industrial developments. Their extension and construction, therefore, has been carefully considered and should be used as a major tool in guiding growth. Any rezoning to higher density residential zones should be carefully coordinated with availability of water and sewers. The cost of providing facilities and services to scattered and isolated developments is extremely high and should be avoided through a sound policy of permitting rezoning only in case of need and when facilities can be provided on an economical and orderly basis.

EDUCATIONAL FACILITIES

Public schools should be distributed throughout Howard County close to the population served so as to keep travel time between school and home to a minimum. Schools and colleges in general should be designed to be utilized in the evening by the community for meetings and recreation. Schools and insti-

tutions should contain ample grounds to create a pleasant visual effect and provide a buffer between buildings and adjoining properties. The basic educational facilities that ultimately should be provided by the County are the elementary school (including kindergarten), junior high, senior high, junior college, and other special schools when a need develops.

Before determining the number and location of schools a detailed study was made of the "buildable" land, existing and proposed land use, existing and proposed residential densities, highway plan and location and staging of water and sewerage facilities. After a given area was proposed to be residential, the estimated population capacity of that area, total persons and school age children, were determined. From this analysis, the number of schools to serve an area could be determined based on the policy arrived at by the Howard County Board of Education and the Planning Commission.

As of June 1960, there were thirteen elementary, two junior highs, two junior-senior high and one senior high school in Howard County. The actual enrollment of students (June 1960) amounted to a total of 6,985 students (4,203 elementary, 2,782 junior and senior high). The school sites occupy a total of 182 acres of land.

NURSERY SCHOOLS

Space should be allocated for nursery schools, taking children from three to five years of age, or through kindergarten if none are provided in the elementary school. These nursery schools should be located in accordance with the population distribution. They should not be built in conjunction with an elementary school unless it is a small one. The nursery school has an important part to play in preparing children for regular school. The nursery schools should be initiated and operated as private schools until a standard of living is reached in the County in which the public and officials would consider them an essential public service and agree to operate them.

Ellicott City Junior High School

ELEMENTARY SCHOOLS

Although most of the elementary schools have from ten to eighteen classrooms, four of the schools have less than six classrooms. In general, classrooms have not been overcrowded as the building program has kept up with the need for schools. The demand for new schools will increase as a result of anticipated greater population growth in the County.

In the General Plan sixty-nine elementary schools have been planned to serve the anticipated year 2000 population of 220,000 to 260,000 people.

The number of schools to be built in forty years would, of course, depend on the actual number of people and school age children in the County.

The elementary schools have been planned close to the center of the neighborhood to be served. The school sites are to be ten to fifteen acres in size and should contain a large recreation area to serve the children and adults of the neighborhood in which they are located. The elementary school should contain twelve to twenty-four classrooms, provide space for students, and serve a neighborhood of approximately 700 to 1,250 families or about 2,800 to 5,000 persons. The elementary school building and grounds should be designed to be used as a neighborhood recreational center when not utilized for elementary educational purposes. Adult educational courses and recreational space and facilities should be provided.

The elementary schools have been planned to be located on a collector street, or at the intersection of two collector streets, or a collector and residential street. Where possible, the collector street and not the residential street should provide vehicular access to the elementary school.

Most of the elementary schools have been located adjacent to stream valley parks, to enable children to use the park strips as walks. The park strips should be designed to permit children to walk to school without crossing any, or only a few, streets. This is especially important for the elementary school where the distance permits most of the children to walk to school. Families within a mile of school should not expect bus service for children. It is also important to have a park-like atmosphere for the elementary schools. Trees and shrubs should be planted near buildings for aesthetic reasons as well as for shade and to screen outside activity from the schools.

JUNIOR HIGH SCHOOL

In the General Plan, a total of twenty junior high schools have been proposed. This figure includes two existing schools. There are two existing junior-senior high schools of which one (Glenelg) is to become a senior high and the other (Tubman) is planned to remain as a junior-senior high.

The junior high school should be planned for eighteen to twenty-five classrooms, and serve 540 to 750 students, and its site range in size from twenty to twenty-five acres. The recreation area of the junior high should be large enough to act as a community recreation area for children and adults. The school building should be designed for use at night, so only a small portion of the building would need to be heated and opened.

A junior high should be in a central location to the area to be served. As a junior high will be larger than an elementary school and have more traffic and noise associated with it, due to busses, evening classes, sporting events and other activities, it should not necessarily be located within the center of a residential area. Most of the junior high school locations have been planned on major through roads or at the intersection of a secondary and collector road.

The major vehicular access to a junior high should be from a major road and with a minor portion from a collector road. Vehicular access from a collector or residential street should be kept to a minimum as it will encourage traffic to use those roads as an arterial for through traffic which is undesirable in residential areas.

HIGH SCHOOL

In the General Plan, a total of five senior high schools have been proposed for the year 2000 population. As there is one existing high school (Howard) and a junior-senior (Glenelg) to become a senior, three additional high schools will be needed.

The high schools should be planned for twenty-five to forty classrooms and serve 900 to 1,200 students. A high school should be fairly large in order to provide certain facilities: gymnasium, cafeteria, science equipment, etc. needed by high schools students. The area of the planned sites range from thirty to forty acres. Each high school should serve a population of approximately 28,000 to 40,000 persons.

As a high school is larger and more of a traffic generator than the junior high school, great care has been taken in locating it. Intersections near a high school must be sufficiently large to handle daily traffic plus traffic generated by sporting or auditorium events. The high schools have been located near the centers of the areas to be served. They have been located on primary roads and when possible, at the intersection of two primary roads, or a primary and a secondary road, with access to both. Off-street parking should also be provided for daily, as well as peak parking needs, as a result of events at the schools.

Buffers of open space and plantings should be located between the high school buildings and recreation areas, and adjoining properties. Lights from night athletic games and activities should also be screened from nearby properties.

JUNIOR COLLEGE

As the County continues to grow and develop higher living standards, there will undoubtedly be a need for more and higher level educational facilities of the junior college type. The junior college fills a need for those who do not desire to obtain a college degree yet need additional education to prepare or train for more demanding jobs than normally filled by high school graduates.

The junior college can be a tremendous help in training people for local government offices, commercial and industrial firms, and by providing adult education classes in the evening to enable people to further improve themselves.

One junior college has been planned to serve a population

of approximately 60,000 to 200,000 people. The size of the school would vary greatly, according to the demand and number of people served, but it should be planned for approximately 400 to 2,000 students.

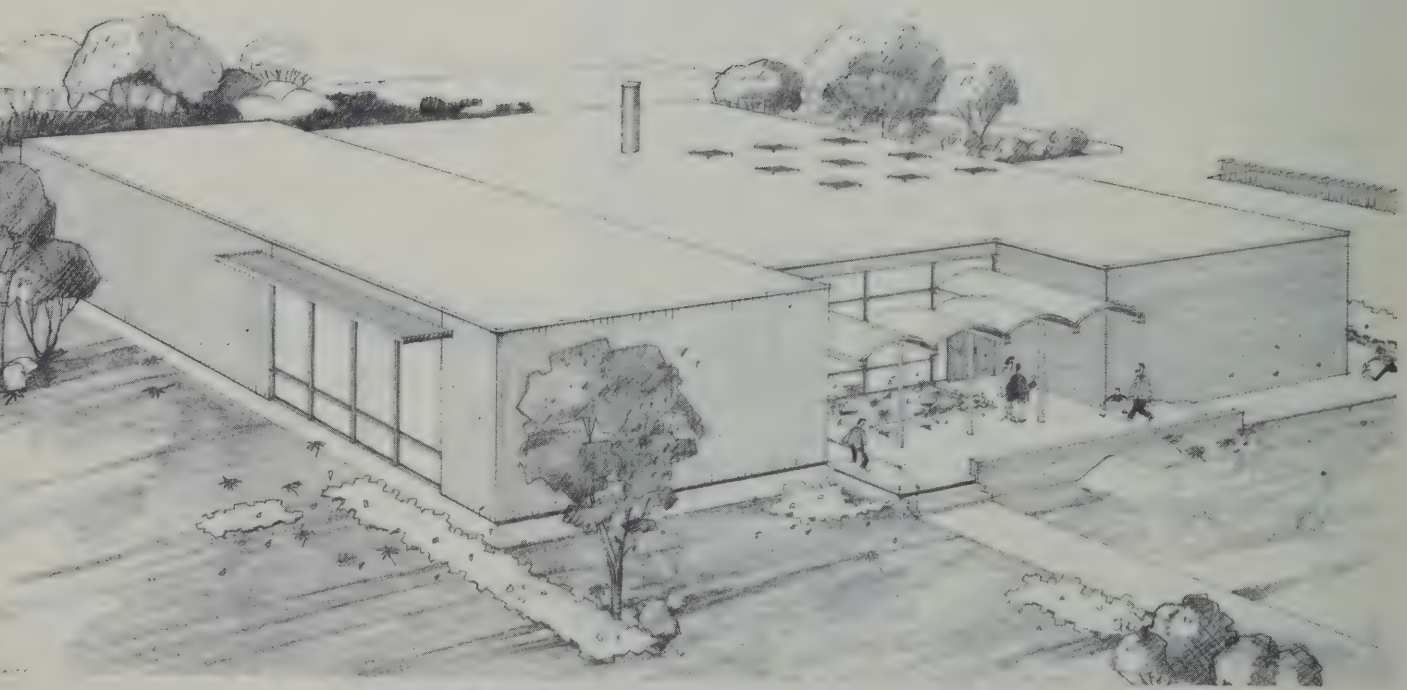
The junior college has been located in accordance with the same standards that apply to the high school. The junior college has been proposed in a location where good transportation facilities could be provided. Public transportation will be important as students will be coming from longer distances.

LIBRARIES

The library system should continue to expand in order to make the library easily accessible to adults and children within the County. Where an area is in the process of developing in the County, bookmobiles should be used to reach the new subdivisions until the area is more densely developed and can support a library. Approximately one library per 20,000 people should be provided. It is estimated ten or twelve branch libraries will be needed within the next forty years. This will vary, of course, depending on the interest, educational and income level of the people coming into a community area.

Libraries, where possible, should be located in the town center or shopping center where they can be easily reached by the public. The library should be large enough to provide many cultural activities to the community. Phonograph records and movies, as well as books, should be available to the public. Meeting rooms for discussions, seminars, and lectures should also be available. Off-street parking, to the extent needed, should be provided for the library users.

Ian C. MacCallum, Architect



HOWARD COUNTY PUBLIC LIBRARY

HOSPITALS, SANITARIUMS AND INSTITUTIONS

Some hospitals need to be located in the core of Baltimore to function properly. However, some hospitals are not linked closely to Baltimore and could locate in a suburban area such as Howard County when there is a need and where there is more open space. Hospitals with spacious grounds can be an asset to a community, in addition to the services provided, as they can create a park-like area and help preserve open space.

Sanitariums and mental hospitals should also be located in a rural or park-like atmosphere. The pattern of activity in our civilization is forcing most people to live more complicated lives. As a result there is great need for the provision of retreats. When a person is mentally or physically ill it is important for therapeutic reasons to make the environment as attractive and pleasant as possible. The countryside, devoid of the reminders of the mistakes of man, advertising signs, noise, congestion, etc., can be an important element in speeding recovery. It is felt a hospital would be a very desirable asset in Howard County, but is not practical, however, until the population has increased greatly.

HEALTH SERVICES

Various health facilities and services, medical and dental, should be available in the County to the public. If possible, medical and dental facilities should be concentrated into small medical office centers rather than distributed as individual offices over a wide area.

These medical facility centers should be located either within or closely adjacent to a town center or shopping center where there is good transportation facilities. There should be ample parking and indoor or outdoor play areas for children waiting for their parents.

A Health Department operated diagnostic clinic should be provided for all residents who are certified for medical care by the Welfare Department and also those who applied for assistance under the Health Department Medical Care Program. There is a need for public nurses to provide care in private homes for people who are ill but need not remain in an institution at a much greater expense.

Preventive medicine practices should be continued, especially for children, through the school system. Services should be expanded as the population increases.

SOCIAL SERVICES

The offices for various social services, vocational and employment guidance, public welfare, family and marriage societies, etc., should be established as needed and located close to good transportation facilities to be convenient to the public.

A permanent Children's Shelter Center should be provided to care temporarily for children who have been neglected or need attention and shelter for various reasons. There is actually immediate need for a Children's Shelter Center. The center would care for children until the Juvenile Court could hear the cases and make decisions as to what action to take.

FIRE SERVICE

There are at present six fire stations which are operated by the Volunteer Fire Service of Howard County.

The fire companies were organized on the below dates:

1888—Ellicott City (Second District)
1937—Savage (Sixth District)
1942—Elkridge (First District)
1943—West Friendship (Third District)
1944—Lisbon (Fourth District)
1947—Clarksville (Fifth District)

The present fire stations were originally located fairly close to the center of the population they served. In the last few years, however, the centers of population are changing and many of the stations are now in poor positions to fight fires in the area assigned to them. For instance, the Ellicott City station is now improperly located, as it is in the corner of the County, at the bottom of a hill and a good distance from the center of population which it is serving. To a certain extent, this is true of the Savage and Elkridge stations. The Clarksville, West Friendship and Lisbon stations appear to be properly located for many years to come.

FIRE PREVENTION NEEDS

At the present time, there are sufficient personnel and adequate fire protection equipment for the fire companies, but in the near future new equipment and new locations will be needed for stations to give the proper service. There is practically no fire prevention work being done in the County and it is imperative that a fire prevention program be started soon.

It is anticipated the fire service will continue to operate as a partially paid and volunteer service although there should be more full-time firemen within the County at a later time. All fire stations in the County should be under the supervision of one full-time fire chief to permit:

—more uniform operation of fighting fires.
—better coordination of personnel and equipment.
—better coordination in expenditure of money and facilities.
—the establishment of a fire prevention and code inspection program.

POLICE SERVICE

At the present there is one very inadequate police station located in Ellicott City. The quarters are small, with inadequate room for everyday administrative duties, improper arrangement for interrogation of suspected criminals and no facilities for a crime laboratory. The station has no facilities for off-street parking for visitors' or police vehicles. The staff of the Police Department has grown from three in 1951 to eleven in 1959, and it is expected to expand as the population increases.

There is a force of ten officers for approximately 36,000 population or one officer for every 3,600 people. Approximate ratios of officers to population in nearby counties, in 1959, were: Anne Arundel, one for 1,000; Baltimore, one for 1,333; Montgomery, one for 1,246; and Prince George's, one for 2,266.

A ratio of one officer per two thousand population would call for a police force of thirty-seven and sixty men by 1970 and 1980, respectively. This ratio would be higher than used in Prince George's County and in Howard County at present, but not as high as Anne Arundel, Baltimore or Montgomery Counties.

FIRE AND POLICE FACILITIES

Fire and police stations have been planned throughout the County to provide adequate fire and police protection for the existing and future populations. In general, the stations should have good access to primary or secondary highways, thereby allowing emergency vehicles to respond to a call within a few minutes. The number and spacing of stations was based on the population density and the type of housing of the area to be served. The stations should be set back from the road, be provided with ample off-street parking and be landscaped and screened from adjacent properties, if necessary.

A total of three fire and four police stations have been proposed in the General Plan. The headquarters for the police department has been proposed in the vicinity of Rolling Acres and Valley Meade Subdivision on Route 40. This new site would eliminate the need for the existing police station in Ellicott City. A fire station, that would be the ultimate fire headquarters should be located near the police station on Route 144. It is felt the two headquarters should be separated. By using combined police and fire stations elsewhere, facilities such as rest rooms, radio control rooms, kitchens and lounges could be shared thereby reducing costs and duplication of facilities.

Fire, police and ambulance rescue services should have their activities coordinated so as to eliminate any inefficiencies of duplicated operations. Fire and police services should probably continue, however, to operate under separate administration. The dispatching of all emergency and patrol vehicles should be handled through the central alarm center, thereby providing for a plan of operations in response to a call.

Historical Buildings and Sites

Historical buildings and sites within the County of local or national historical importance should be reserved and kept in good repair. The buildings and sites that are considered valuable and should be preserved have been included in the General Plan.

Historical buildings of importance should be saved and, if possible, utilized as a living monument and not "preserved" as a museum piece that remains as a hollow shell of its former grandeur. If a building has an especially pleasing appearance every attempt possible should be made to preserve some open space of a few acres around the building in order to accent the structure.

The historical buildings and sites in the County should have plaques placed on them with the pertinent information relating to their historical significance placed on the plaque. The buildings and areas should also be photographed and a record made of the importance and significance of the buildings and sites. This information should be made available to schools, organizations, and interested individuals. It is important to photograph and insure preservation of historical buildings and sites in Howard County because the impact of rapid growth on the County may bring about the construction of new buildings around the historical sites in such a way they cannot be seen or they may actually be destroyed. The following churches, burial grounds, homes, public buildings, and bridges listed below, have been classified as being of historical significance and are shown on Map, "Historical Buildings and Sites."

HISTORICAL BUILD

L E G E N D

HISTORICAL HOMES

- H 1 ANGELO COTTAGE
- H 2 MOUNT IDA
- H 3 ELLICOTT HOUSES
- H 4 ELLICOTT HOUSE
- H 5 BELMONT
- H 6 TROY HILL
- H 7 BURLEIGH MANOR
- H 8 DOUGHREGAN MANOR
- H 9 OAKLAND
- H 10 BLANDAIR
- H 11 FOLLY QUARTER
- H 12 Mc TAVISH
- H 13 WALNUT GROVE
- H 14 GLENELG
- H 15 ATHOL-1740
- H 16 IRIS HILL
- H 17 MONTPELIER
- H 18 WAVERLY (BROSENUE)
- H 19 OAKDALE
- H 20 CHERRY HILL

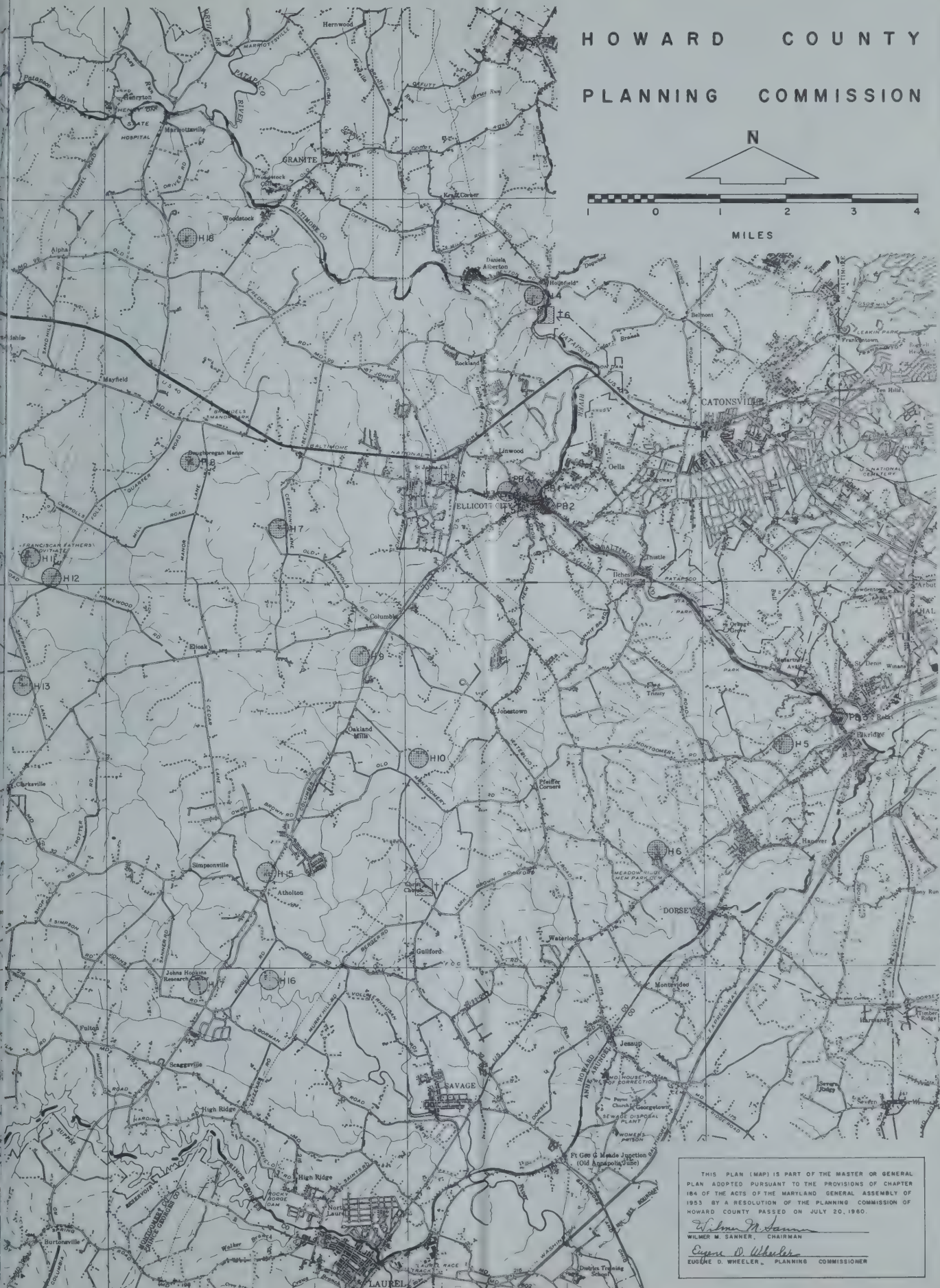
CHURCHES AND BURIAL GROUNDS

- † 1 CHRIST CHURCH - 1812
- † 2 ST. JOHN'S
- † 3 ST. BARNABAS' CHURCH
- † 4 UNION CHAPEL
- † 5 QUAKER MEETING HOUSE AND BURIAL GROUND
- † 6 ELLICOTT BURIAL GROUND

PUBLIC BUILDINGS AND STRUCTURES

- PB1 PATAPSCO FEMALE INSTITUTE
- PB2 B&O R.R. STATION
- PB3 THOMAS VIADUCT
- PB4 COURT HOUSE

INGS AND SITES



THIS PLAN (MAP) IS PART OF THE MASTER OR GENERAL PLAN ADOPTED PURSUANT TO THE PROVISIONS OF CHAPTER 184 OF THE ACTS OF THE MARYLAND GENERAL ASSEMBLY OF 1953 BY A RESOLUTION OF THE PLANNING COMMISSION OF HOWARD COUNTY PASSED ON JULY 20, 1960.

Wilmer M. Sanner
WILMER M. SANNER, CHAIRMAN

Eugene D. Wheeler
EUGENE D. WHEELER, PLANNING COMMISSIONER

Doughregan Manor

Edgar H. Pickering

Christ Church

Community Renewal Program

As there are several sections of the County that have deteriorated physically, it is important that a community renewal program be initiated soon. By adhering to certain requirements, it is possible to obtain Federal funds for clearing slum structures and rehabilitating deteriorated areas. A renewal program could eliminate or greatly improve problem areas and prevent future ones from occurring.

A sign and bill board regulation should be prepared which would make it possible to remove non-conforming signs and billboards. This will greatly aid in making U.S. Route 1 a more desirable area for industry and other land uses. It will also do much to prevent many parts of the County from being littered with unnecessary signs.

There are indications that there is a need for strict enforcement of zoning regulations in the County. There should be active and aggressive enforcement of regulations, to maintain the attractive appearance and character of the County.

Conclusion

The General Plan has been prepared, reviewed with the public, adjustments made and finally adopted by the Planning Commission on July 20, 1960. An important task is now before the citizens and the officials of Howard County. With the assistance and support of citizens and officials the Plan can be implemented, with adjustments now and then to improve it. The County has a wonderful opportunity to grow in an orderly manner, preserve much of its natural beauty, have fine residential, commercial and industrial developments and in general, become one of the most outstanding counties in the State. The chaotic results of not planning and developing properly can be seen in many nearby jurisdictions. The choice is before all Howard Countians. What will it be?

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